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OF
JOBS



COMPUTER EXPRESS

Britain's biggest selling computer weekly • Issue 46 • Sept 23 1989 • 58p

PC

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- Graphics utilities

AMIGA

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- New music creators
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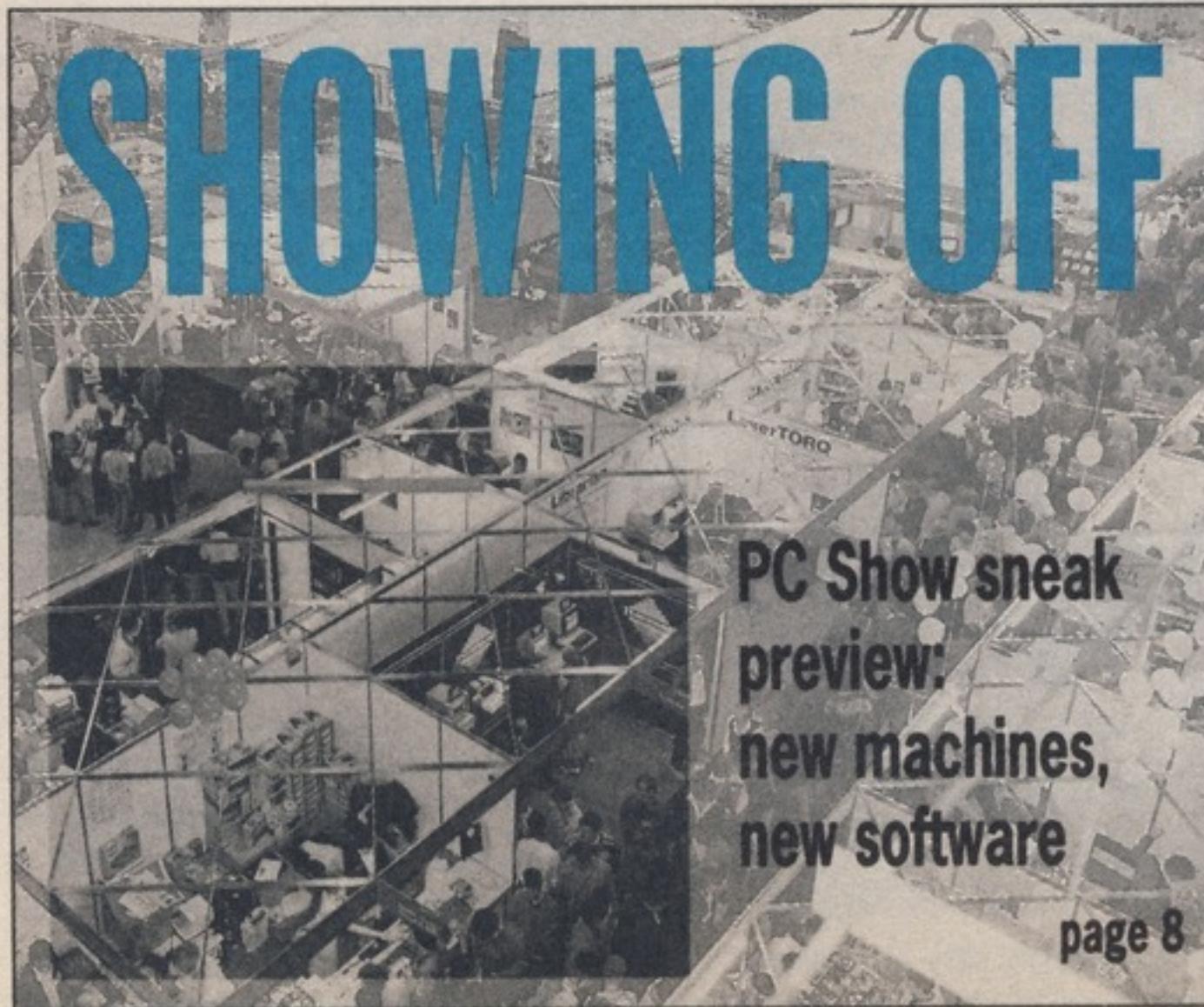
BUYERS' GUIDE TO MAKING MUSIC

PC REVOLUTION



A full MS-DOS PC in your pocket

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new software

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• Hand-held rocks PC market

TINY POQET PC PACKS A PUNCH

The first fully MS-DOS compatible pocket PC was last week launched to enthusiastic onlookers in London.

Called the Poqet PC it is being sold as the ultimate in Filofax size computing. The technology is remarkable as for the first time a pocket sized micro can run ordinary MS-DOS programs. The machine will cost £1,200 when it goes on sale here later this year.

Leading software developers have already agreed to produce business programs on the credit card size cards which slot into the two drives. This shows an unprecedented level of confidence from notoriously cautious software developers.

The Poqet (pronounced Pocket) PC is nine inches wide four inches deep and less than an inch thick, weighing only one pound including its two AA sized batteries. It runs an 80C88 processor which Poqet (the manufacturer) says is faster to use than a 286. This is because the cards have massively faster access times than standard floppies.

The RAM is a basic 512K while 640K of ROM contains MS-DOS and the resident applications.

The PC's display consists of a double Supertwist mono LCD measuring 80 characters by 25 lines with a 640 by 200 pixel resolution. Users can adjust the screen to suit.

The neat keyboard is simply a miniaturised version of that found on any PC with 12 function keys. There is an I/O bus for peripheral expansion and data transfer and a built in RS232 serial communications port.

The two 'disk' drives situated at the ends of the machine carry credit card size memory cards. Programs such as Lotus 1 2 3, WordPerfect 5.0, Informix SmartWare, AlphaWorks and XyWrite III Plus will be available at the same price as they appear for normal PCs. Also, 64K and 512K RAM cards will be sold for £100 and £400 respectively.

Five built in applications will be included. These are a word processor, appointment calendar, address book, four-func-



• Pick a Poqet: The new generation

tion calculator and a terminal emulation program.

There's also a file transfer utility for communication with desktop machines. As well as loading programs through the cards users can link up with a desktop PC. Then, a program can be transferred and the Poqet will retain it until it is removed.

Buyers won't just be treated to a computer the size of a video cassette. They can also be sure of a long battery life. Poqet says the two batteries will last for 100 hours.

A few hours before running out a warning light will come on. Then another will appear stating that you have 10 minutes to change the battery. During those 10 minutes the machine will retain all the data. Indeed, with the machine closed it can sit without batteries for five days without losing any data.

The secret of this low power consumption is jealously guarded by Poqet, but in effect the firm has devised a way of making the central processing unit only run when it needs to. It shuts itself off automatically between key strokes.

Simultaneously a 3.5-inch portable disk drive has been unveiled running four batteries. That allows users to transfer files from the Poqet to desktops. The drive will run for 25 hours from the batteries.

Poqet was set up in California by ex-employees of Compaq and IBM with the sole purpose of developing such a machine. After extensive market research they started work last summer.

President and chief executive officer Dr Stav Prodromou commented: "Our objec-



• Prodromou: "A new standard"

tive was to design a computer that would eliminate concern about power supply in a portable PC. Through a combination of patentable hardware and software innovations, we were able to deliver unprecedented battery life using universally available batteries."

He added: "The Poqet PC sets a new standard in size, weight and battery life. It will open the market for portables allowing people who are unhappy with current generation of heavy and inconvenient machines to access a truly portable, full-function computer that runs MS-DOS software."

The firm believes executives and professionals will ditch their laptops in favour of its tiny machine. It is aiming for initial sales of 100,000 in its first year.

Although a good deal more expensive than Atari's Portfolio the Poqet PC offers much more in terms of battery life and compatibility. Indeed, Atari may find its machine being regarded as the poor man's Poqet. Poqet can be reached in the UK on 0753 580018. ■



• File transfer to desktop PCs is a doddle with the supplied lead and software, or use the portable 3.5-inch drive

MGT's unpretentious little eight-bit

Miles Gordon Technology last week launched its long awaited low cost eight-bit micro the SAM Coupé, writes Jerry Glenwright.

Costing £150 the machine has been in the news since its inception three years ago. The Spectrum-compatible computer is being pitched as the ideal low-cost machine. MGT is trying hard to invest the SAM with an image of understated faithful reliability - your ever-ready computing friend - rather than as a direct competitor to the muscle machines such as the Amiga and ST.

To this end, the SAM Coupé has its very own cartoon character

intended to promote the machine's more technical capabilities while reassuring those with a fear of all things silicon.

Sam - the cartoon character - appears throughout the manual, holding your hand and guiding you to a greater understanding of the machine's features and computing in general.

A bevy of the computer huck faithful were on hand to wet the baby's head, and amid the flowing champagne ever reddening faces feigned interest, forced copies of their latest diatribes into unwelcoming hands and longed for lunch.

Bruce Gordon the Coupé's design-

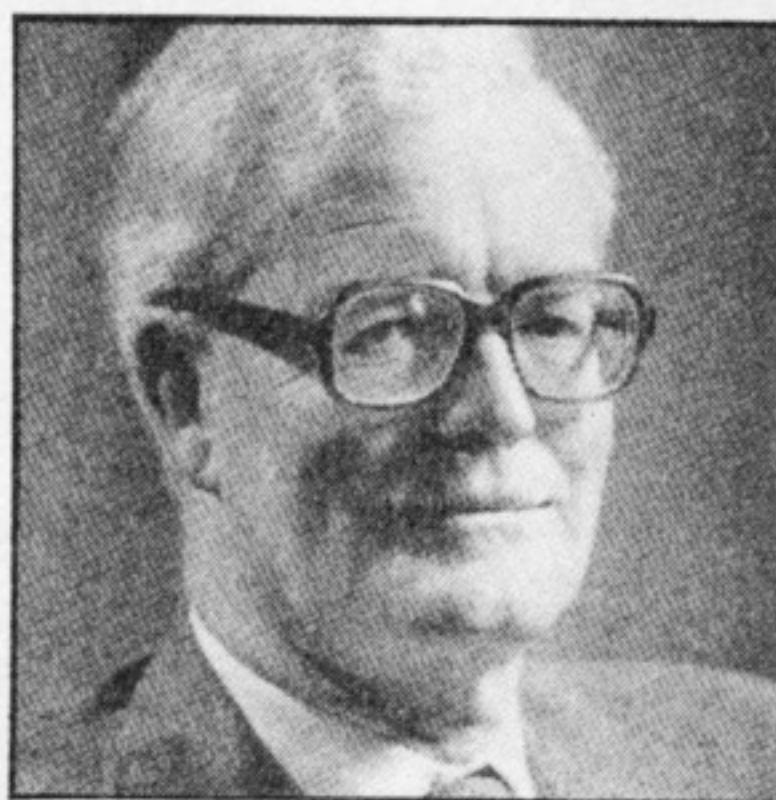
er, wowed the assembled with some stolen ST graphics screens and a few hum-drum BASIC routines plotting math functions on-screen. But notwithstanding the lousy demonstration and the aging technology the SAM is a great machine at a price unmatched by similarly specified computers.

Sporting a fast Z80B microprocessor, 256K of RAM, plug-in 3.5-inch drives, built-in networking and more user ports than you can shake stick at, the SAM Coupé is set to storm the home and educational sections of the market. ■

• Full story in next week's Express.



• MGT's Gordon (left) clutches SAM with partner Alan Miles



• Hurd: It's up to users

Hurd calls on users to monitor porn

The Home Secretary Douglas Hurd has called on home computer users to report bulletin board porn to the police.

Although on-line porn is clearly on the wane the Government is still concerned that youngsters can so easily tap into depraved material. Hurd was speaking after Conservative MP for Brentford and Isleworth Sir Barney Hayhoe raised the matter. He had been receiving complaints from constituents whose children had come across pornography.

"The problem with pornography on bulletin boards is not so much a gap in the criminal law as the practical difficulties in tracing suppliers and obtaining evidence," said Hurd. ■

Robocop is back

Ocean is planning to launch a follow up to its massively successful game Robocop - it should arrive late next year.

The game will follow the plot of the forthcoming movie Robocop II. Games designers at the firm's Manchester office are currently studying the film's script and putting together a game plan.

Meanwhile, Ocean has been showing off its impressive line up for the next few months, see preview on page seven. ■

Underfunded scientists warn Government:

BRITISH LEAD WILL BE SQUANDERED

A British project which is aiming to produce the most advanced computers in the world is being hampered because of lack of funding.

Scientists at the University of Wales in Bangor have been working on revolutionary neural networks for the past two and a half years. Rivals in Japan and the United States are making remarkable breakthroughs in neural technology, but the Welsh scientists say they have a new approach which will offer more power at less cost.

However, Britain's chances of taking a lead in this most important race are being hampered by a reluctance by Government to hand over money. The University says it needs £75,000 to stay ahead - a relatively small amount. However, although the Science and Engineering

Council regard the project as "alpha" rated it says it cannot afford to cough up the cash.

Andrew Spray from the university commented: "The problem is that they can only afford to pay one third of the projects marked alpha. And although this is extremely important the University of Wales in Bangor doesn't exactly leap off the page. It's a matter of geography." He added: "Without this money we'll definitely fall behind. The potential is massive but we can only make the best out of a small grant and struggle through."

The chip is being designed to "think" like a human brain. The University has produced a single neural chip and is capable of producing more at a relatively low cost. By linking them all up and teaching the computer over a few years

it could become the first fully formed artificial intelligence.

Speaking at the annual meeting of the British Association for the Advancement of Science last week project leader Dr Simon Jones said: "We have produced a neural chip and it works. It has only one neuron on it - we did not have enough money for more - but we can start to build high speed systems that start to do some of the things people do." In the near future such a chip could be used for sound and vision recognition, an area still in its infancy.

He said that the most powerful computers today are "less clever than a mouse" because they cannot learn. He warned that Britain would be overtaken. "I am British. It is UK Ltd we are fighting for," he said. ■

Amstrad launches basic power machines

As widely expected Amstrad has launched single disk drive units of its 286 and 386 PCs.

Costing £750 and £1,250 the 1286 and 1386 are the first additions to the range since they were launched this time last year. Amstrad says the new machines are pitched at users looking to tailor their own individual system.

Flexible is a word being banded around - the idea being that buyers will be attracted to a no-frills system allowing good expandability

options. The system comprises 1Mb of RAM with a single floppy disk drive. The problem with this is it means disk intensive applications will require frequent disk swapping operations.

Amstrad clearly feels that there is an untapped section of the community which feels no need for multi-disk programs. However, quite why someone would want to skimp on paying extra for a double drive 386 is baffling. Most applications which need the extra power of a 286 or

386 micro are far too large to run off a single floppy disk drive. PageMaker for example requires at least 2Mb of disk to run.

Amstrad's Malcolm Miller explained: "We consider that up to 30 per cent of the market for 286/386 machines is not satisfied with highly specified models - there is a gap for the value added market which we aim to fill."

He went on: "These machines offer endless possible configurations for specialist users who require a basic

building block on which to base their computer system. Users get maximum value from a system tailored exactly to their requirements without paying for unnecessary extras."

Meantime, the recently launched £99 automatic sheet feeder for the PCW is being bundled free with the 9512. This offer lasts until next January.

And, in a busy Amstrad week, the firm surprised no-one by launching a £599 fax machine. ■

COMPUTER EXPRESS

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COMMENT**The future in their pocket?**

The Poqet PC has an impressive spec, and is the first true MS-DOS computer that will fit in your jacket pocket. But will it sell?

There is, after all, little reason on the face of it why a pocket size MS-DOS machine should be that much more preferable to a laptop. Business people don't go round in T shirts and shorts, they take briefcases. An A4 size keyboard is rather easier to use than a Filofax-sized one. And, on the other hand, for those who really need something in their pocket, there's a cheaper option in the form of the Atari Folio.

But the experienced team behind the Poqet have done their homework and know their target market very well. The inexorable trend of the 80s has been towards personalising, miniaturising and consumerising everything, and probably technosociology courses of the future will see the emergence of the Walkman as marking the beginning of the trend. It's interesting to note that the Walkman's prospects for success were severely doubted by the Sony board, principally because the Walkman could only play back. It succeeded, of course, because everyone with a Walkman has a tape recorder at home with which to make recordings they can then take with them.

The main asset of the Poqet is similarly that it can run any MS-DOS software its owner runs at home on their main PC setup. It will be interesting to compare the sales of the Poqet with the much less expensive Atari Folio, which is not PC compatible.

Is it too glib to assume that because computers were the size of a room in the 1960s, the size of a cabinet in the 1970s, and the size of a television in the 1980s, that they should be the size of a book in the 1990s? Many think so; the size of the keyboard is, after all, a limiting factor, unless undreamed-of technology is made practicable in the next decades.

The success or failure of the Poqet will show what the flavour of computing will be in the 90s.

SAFETY PC DOUBLES UP

Opus has launched an extraordinary PC with two 60Mb hard drives working together.

In effect this means that both hard drives are doing exactly the same job – one shadowing the other. This means that if one drive crashes the other will still have all the information.

Called the DataSafe Opus's new machine costs £1600. The emphasis is clearly being placed on security – it even has locks on the case preventing snooping scoundrels snitching data.

The 286 based PC has a transfer rate of 1,740 Kbytes per second. For a 286 this is incredibly fast. The seek time is 18 milliseconds. This has been achieved by providing independent read/write heads able to seek out data wherever it may lurk.

DataSafe is also equipped with password software giving the user complete control over who can see what data. More on 0737 765080.



• Double drive: two 60Mb hard disks are better than one

Victor matures

One of Europe's largest PC manufacturers, Victor is to be bought by American retail and electronics giant Tandy.

Under the agreement Tandy – already one of the US's biggest personal computer manufacturers – will have full rights to Victor's line up of PCs. Tandy has also picked up the Victor Micronic handheld computers.

The Victor names have been sold by parent company Datatronic for an undisclosed sum. Victor's top brass are saying that the move will give their machines better access to end users through the Tandy stores and will mean a combining of both companies substantial research and development resources.

Sales of Victor and Micronic products exceeded \$200 million last year.



• Spectrum: programs going free

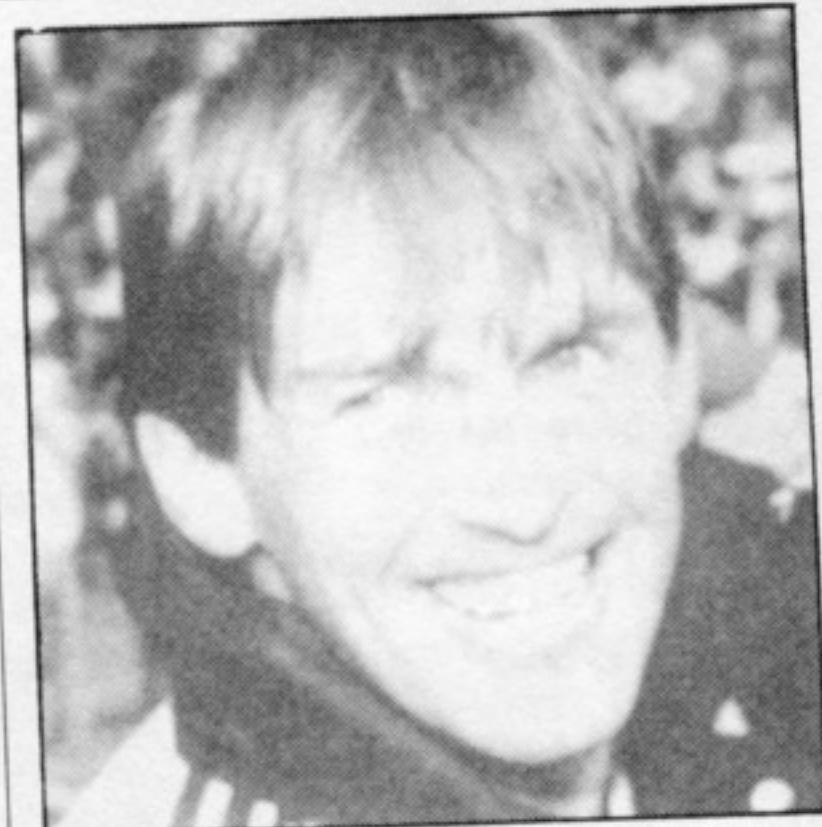
It's better on PD

Amidst the ballyhoo concerning PD profiteers a new company has been set up which aims to provide Spectrum owners with free programs.

The Speccy Sector has been put together by Chelmsford-based Owen Brown who says he's only doing it for the love of the Speccy. Owners need only send in a tape and the return postage.

Says Brown: "I'm not looking for a profit, the Speccy Sector will only be a natural extension of my hobby. And it'll look good on my CV. It won't be a rip off because I'll charge nothing."

However, Brown has only a small selection of PD and he wants enthusiasts to send legitimate programs in to 1 Roxwell Road, Chelmsford, Essex, CM1 2LY.



• Dalglish: second's out

Dalglish's double

Football's finest Kenny Dalglish is to appear in another computer game from budding publisher Impressions.

Kenny Dalglish Soccer Match is an arcade action simulation of a football match while its predecessor, Soccer Manager, was a footie strategy affair. Another game based on the Liverpool manager and former Scottish striker is promised by Impressions in the near future.

Soccer Match costs £19.99 on ST and Amiga. More on 01 384 2701.



• State of the art circa 1973

Those were the days...

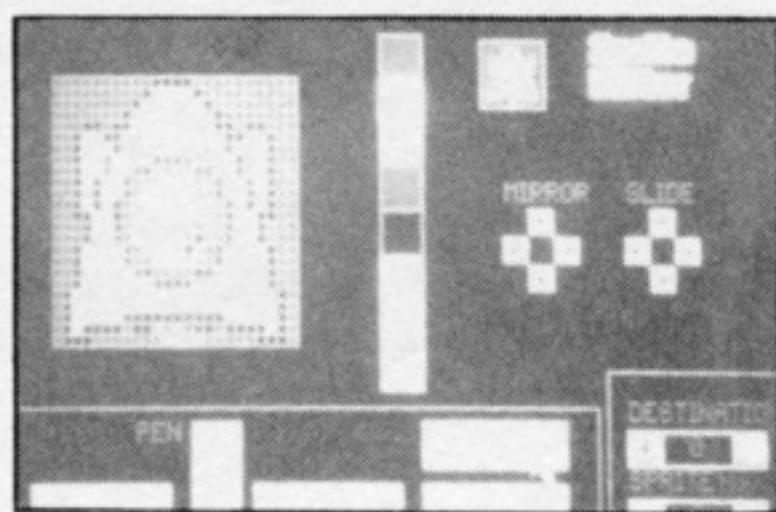
Remember the hours of fun you had bouncing that ball off the wall in Pong? Nostalgia lovers can relive the experience on their new micros thanks to a Golden Oldies compilation.

Mindscape is bringing in the four-game pack from Californian firm Software Toolworks. It includes Pong, Adventure, Eliza and the classic mathematical game Life. In their day these programs knocked people's socks off but they're pretty laughable now.

Nevertheless it's a useful pack for the computer enthusiast and costs a tenner on the PC, Amiga, ST, C64, Atari 800 and Mac.

Also coming soon from Software Toolbox is Beyond the Black Hole, a three-dimensional puzzle game on the PC. As with most 3D games you need to play the idiot wearing silly glasses, but the 3D effect, which seems to work by polarisation and is therefore in colour, is quite effective.

More on 044486 545.



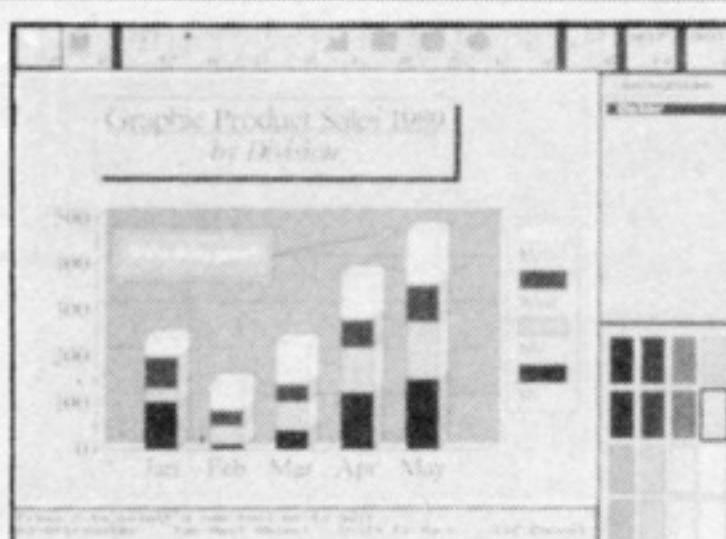
• One for SEUCKers

SEUCK it and see

Good news for Atari ST owners impatiently waiting for Palace's Shoot-'Em-Up Construction Kit - it's ready.

The package which allows you to produce your own action-packed computer games should be released within the next few weeks. Palace says users need have absolutely no programming knowledge to put together their own games.

SEUCK is already available on the Amiga and C64. The ST version will cost £29.99. ■



• Quattro goes pro

Upgraded Quattro rivals Lotus 1 2 3

Following the immense success of Borland's best selling spreadsheet program Quattro, comes Quattro Pro, the spreadsheet that uses less memory yet offers more features than before.

Using only 512K of valuable RAM memory, Quattro Pro uses Borland's proprietary object-orientated memory manager VROOMM, to provide multi-page three-dimensional consolidation conceptual modes, free form linking and up to 32 overlapping spreadsheet file windows allowing users to be limited only by their own imagination.

There's a built-in draw program, Bitstream fonts and support for PostScript printers too. Quattro Pro retails at £395. More details on 0734 320022. ■

Bearing up

Those few people in the Soviet Union saving up for a home computer are in for some bad news.

The Soviet authorities have slapped a 5,000 rouble surcharge on all imported computers with more than 128K of memory and 1,000 roubles on smaller micros. However, large companies with access to Western currencies will be able to dodge the tax by paying in dollars. ■

LOW COST CD-ROM DRIVE ARRIVES

A new offer has been made to PC and Mac owners hoping to get in on the booming CD-ROM world without having to take out a second mortgage.

Comcen Technology has put together an inexpensive all in one CD-ROM pack which includes the drive, simple connecting cables and thousands of public domain programs stored on compact disk.

This will cost £650 - normally a mere CD-ROM drive with one program costs thousands of pounds.

CD-ROM offers massive amounts of storage which can be accessed at incredible speeds. Many agree that CDs will take over from magnetic media as

the storage medium of the future.

The programs on offer include tutorials, vast databases, graphics, comms and source code.

"There are now hundreds of public domain programs available on CD-ROM. We thought it was time someone put it together at an affordable price," said Comcen's Paul Fletcher. "CD-ROM need not be as expensive as some manufacturers would have us believe. You're only paying about 10p for every program on the disk," he said.

Meanwhile, the firm has launched the first portable CD-ROM machine. It weighs about 20 pounds and has an entry level price of £3,495. More on 0792 796000. ■



• The first portable CD-ROM machine - but vast storage need not be too expensive



• PPC: New expandability with add-on expansion box

The deskbound portable

Alfa Electronics has produced a new gadget to turn the Amstrad PPC into a desktop computer.

Cynics amongst you will point out that this rather defeats the point of portability but more and more PPC owners find they use the machine in one place for long periods. And they're looking for ways to expand the PPC.

Alfa's PPC Expansion Box gives you access to

four ports just by plugging it into the user port. The you can link up to any PC compatible add ons such as hard drives, VGA graphics board or clock card. It costs £199. More on 01 390 2588. ■

Express motors ahead

It's official. New Computer Express is now Britain's biggest selling computer weekly.

Figures released by official audit bureau ABC reveal a circulation of 24,638 which means that more copies of Express are bought every month than any other computer magazine.

Publisher Greg Ingham commented: "Many thanks to our readers for making Express such a success story. We always hope that we'd be appealing to many thousands of dedicated computer users, and these figures prove that.

"We've got some very big plans for Express which we believe will secure its position. Basically, watch this space!" ■

TRANSYLVANIA'S ZANIEST GAME



That vegetarian vampire and connoisseur of broccoli sandwiches Duckula is to be transformed into a computer game.

Alternative plans to bring out a game of the TV cartoon character later this year at the low price of £2.99. It will be aimed at the hordes of young Duckula fans - six million tune in to his antics every week.

Alternative is the only firm which licences characters for release at budget prices. The earlier Postman Pat was deemed successful enough to launch a second version later this year.

Duckula will be out in October for eight-bit machines with ST and Amiga versions expected by Christmas. ■

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• Here comes the hype: Amiga Batman

This Christmas, now only 78 shopping days away, will mark a watershed in the UK games software market. Last year a whole host of companies got bloody noses fighting for the top chart slot, and as next week's PC Show ushers in the new season, there's the hilarious prospect of modesty breaking out among software purveyors throughout the land. "Number one? Us? You really think so? Oh gosh, that's very nice of you to say so."

Take US Gold, for instance. Last year its hopes were pinned on *Thunderblade*, which despite TV advertising got no higher than number five, and still exceeded sales targets. "We're not going for a Christmas number one," *NCE* was told, "because really, it's only the magazines that are interested. Everybody would like a number one, of course they would, but it isn't necessary for a good market share."

This caution can be attributed directly to Ocean's highly impressive Yuletide performance in filling that "all important" number one spot with both *Operation Wolf* and the record breaking *Robocop*, which was beginning to look as it had got itself stuck permanently at the top of the charts.

Like last year, all the big guns are licences, following the age old formula: Christmas + Arcade/Film titles = Big Bucks. "A few years back, software companies," an Ocean archivist recalls, "ourselves included, bought strong licences and just turned out games relying on the strength of the title to sell them." With so many conversions now flooding the marketplace, however, a title alone no longer guarantees success. The conversion has to stack up as a game, as US Gold is the first to acknowledge: "A licence won't sell if the code is crap."

Grannies and virgins

Ocean still relies on buying ready made success from the arcades and cinemas. Its recently unveiled winter line up consists of *Chase HQ*, *Batman*, *Operation Thunderbolt* and *The Untouchables*. Why are licences so essential? Domark's line: "If they [the consumers] see a name like *Pictionary*, *Trivial Pursuit*, *Hard Driving* or *Robocop* it's something they recognise and will buy."

But what of original games? Is Christmas off limits for an "unknown" commodity? "If you don't go for a licence you can still do good business, but over a longer period," is the Microprose verdict. "Who heard anything of *Afterburner* or

CAR WARS

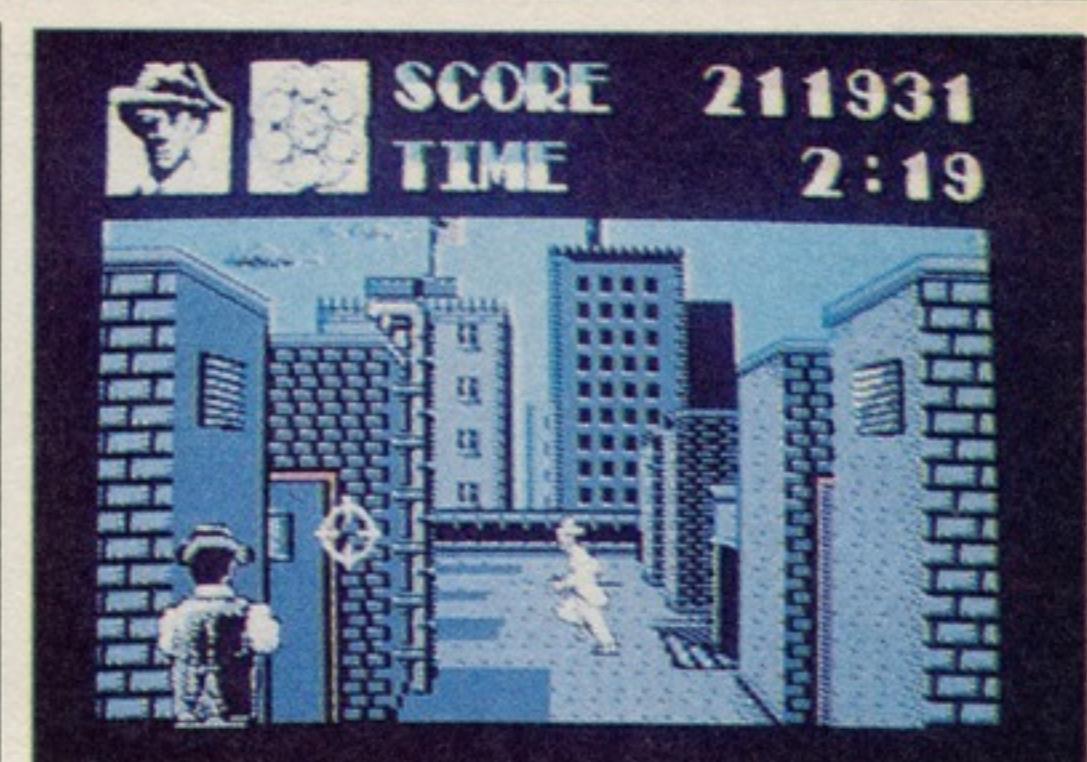
What's will be number one for Christmas? It's an impossible question, but chances are it will be a "wheelie." At least five major software houses are releasing driving games as main contenders for the Christmas top spot. Take your pick from among this lot:

Out Run Turbo (US Gold)
Power Drift (Activision)
Chase HQ (Ocean)
Stunt Car (Microprose) and
Hard Drivin' (Domark).

My money is on *Power Drift* - at least if the arcade original is anything to go by.



• Chase HQ races away on the Spectrum



• Watch out for the Untouchables, here on the Speccy

CHRISTMAS IS COMING

The software companies are getting fat. Trenton Webb has a premature look in his stocking



• Amiga Operation Thunderbolt

Operation Wolf two weeks after Christmas?" Non-licence products may not have the same immediate impact but do enjoy (if they're any good) longevity and suffer less from the "hype today, gone tomorrow" syndrome.

What makes Christmas so unpredictable, though, are the grannies, virgins and hotpants. The "Granny Factor" - pick a game for Johnny, any game - is almost impossible to control. The "Software Virgins," who get their first computer for Christmas, have no games buying history to guide their software purchases. Result: a heavy dependence on advertisements.

Some like it hot

And then there's the hotpants. The post-Christmas surge is down to gift vouchers and money presents, burning that hole in the trouser pocket and presenting the software houses with a welcome and undeserved cash bonus. But in giving the consumer power to buy more software, it also allows experimental, frivolous and downright bizarre choices. The anguish of the market research and strategic planning bods as they attempt to read the runes can only be imagined - and enjoyed.

Licences are tempting because they're popular; but they are a big money gamble. A big name

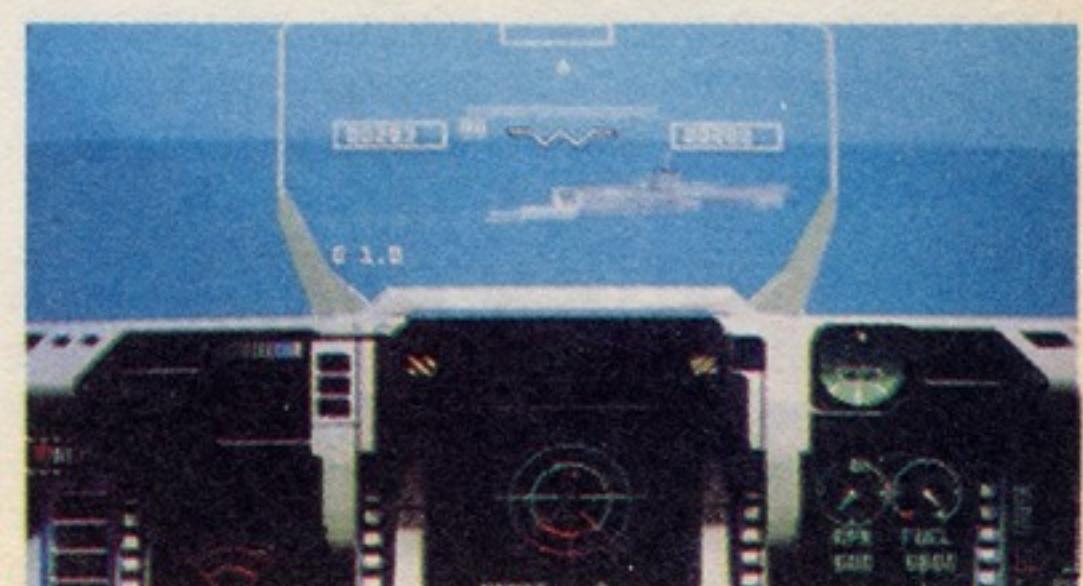
movie can cost a software house some £50,000, and a top arcade licence as much as £200,000. When these costs are coupled with investment in development and advertising - the bill for a double colour page in a market leading magazine is a couple of grand - a game has to be a big hit just to cover the initial investment.

An all out hype war benefits no-one, because while winning offers immense rewards, the cost of failure is fast becoming too high to contemplate.

There's one final factor to consider, too. With the growing threat from the console boys, this could well be the last of the easy Christmas money. ●



• Airborn with F-29



THE PC SHOW

PREVIEW

Mindscape, usually known for its games, is launching a new range of sub-£200 business packages from US outfit **SOFTWARE TOOLWORKS**. These include *Twist & Shout* - not a Beatles cover, but a sideways printing program for spreadsheets, *Numbers Up*, a memory-resident spreadsheet, and the artificial intelligence-based tutor *Mavis Beacon Teaches Typing* (didn't she have any of her own?).

MIDI music is back on the Sound-on-Sound Music and Micro village, including the **YAMAHA** Music Pulse Stand and new products from **ROLAND**. The leading London hi-tech store will be demonstrating the Yamaha CI20 Music Computer which although described as 'not 100% IBM compatible' is built specifically for music applications. It has 11 MIDI ports, assignable realtime control sliders and musical notation on the keyboard, and is supplied as standard with Yamaha's 400 track sequencer and bulk manager/MIDI monitor.

The PC Show at Earls Court next weekend, 27th September to 1st October, promises to be the biggest and best ever. There are going to be new products launched by Amstrad, Atari, Commodore and Acorn among others.

This year the first three days - Wednesday to Friday - will be exclusively business and trade. Saturday and Sunday though the show is open to the public - so here's a guide to the most important products on display. There'll be a floor plan and how-to-get-there guide in the centre pages of the next edition of New Computer Express

THE GREATEST S



ACORN is going to be demonstrating the Archimedes A3000, touting it as a low-end RISC machine for schools. The 400 series Archimedes range will be returning to the show with the recently-introduced mid-range 420.

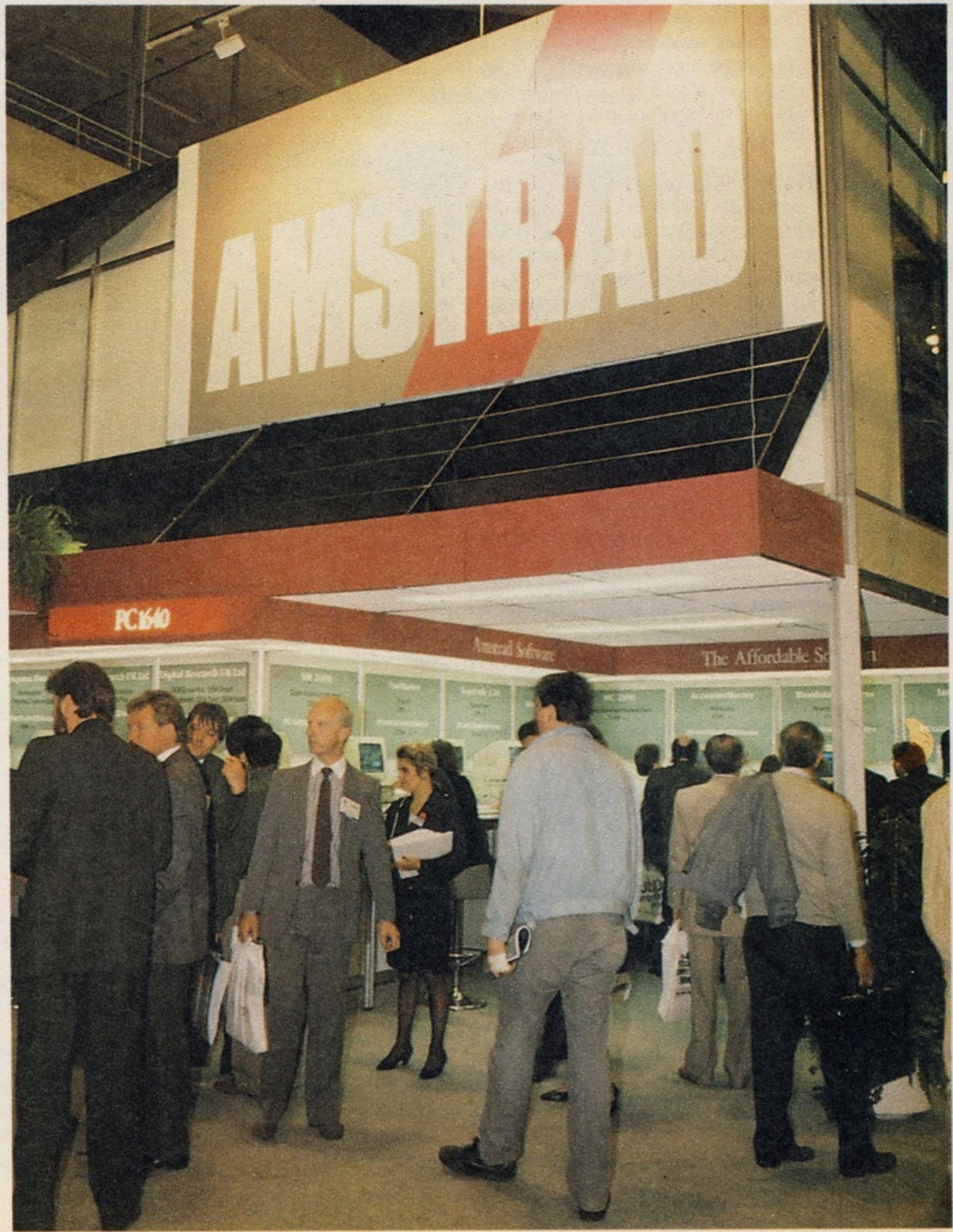
LOCOMOTIVE SOFTWARE is planning a 'major product launch' at the show in response to customer demand, likely to be a PC version of *LocoScript*, following on from *LocoFile*, the database add-on for *LocoScript* launched last year. The new multi-lingual versions of *LocoScript* will be on display, in Arabic, Urdu and Farsi, along with BASIC 2 for GEM based PCs (in English).

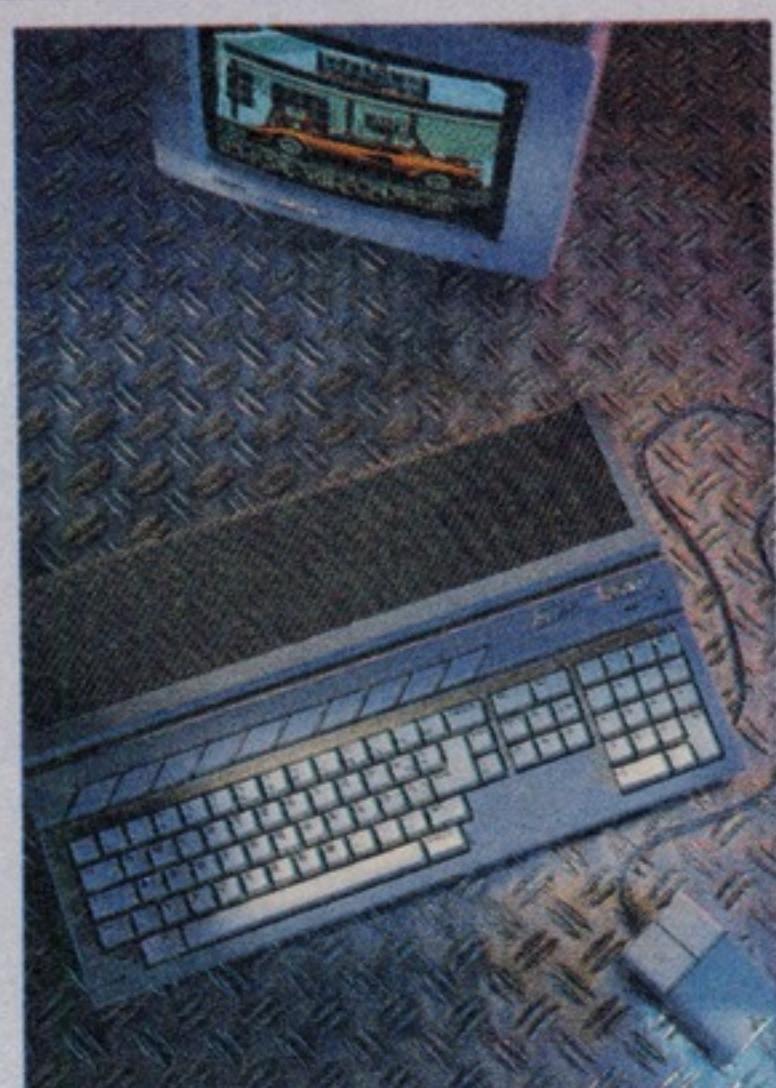
OPUS's new 'revolutionary' PC which promises 'speed, security and data integrity' will be on show. It's apparently been acclaimed by the police in 'secret pre-launch trials'.

IANSYST will be demonstrating KWICTRACK, not a spelling checker fortunately, but a software maintenance tool that 'cuts programming effort by about 68%'.

HEWLETT PACKARD is one of the biggest companies attending the show for the first time and has taken one of the largest stands to show the Jet family of printers.

PHILIPS is also there to show off its new range



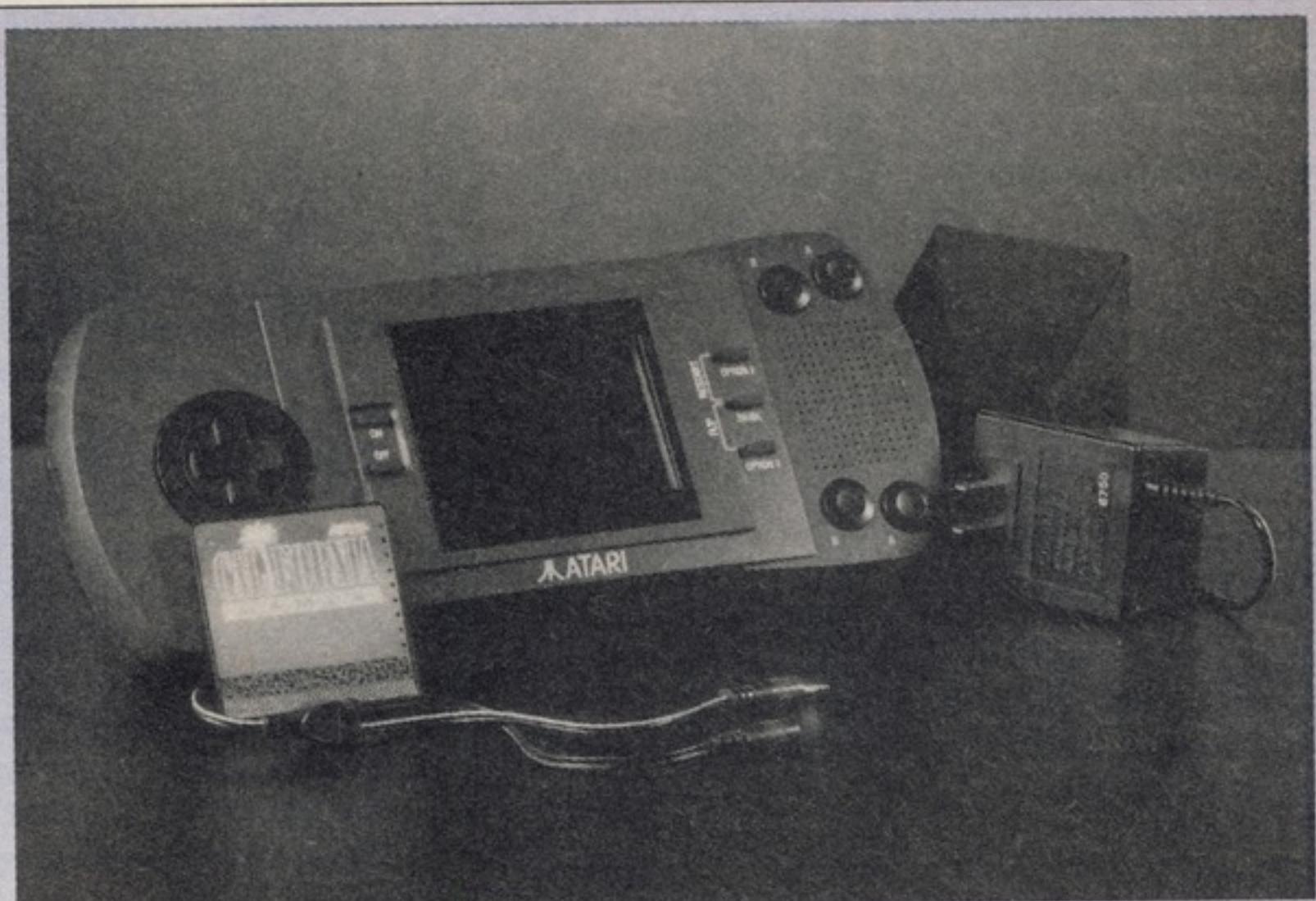


ATARI's upgraded ST, the STE, will be on display, giving most of us our first glimpse of its 'Amiga beating' micro. How do those graphics compare with the Amiga? Here's your chance to find out for yourself.

Atari is also setting up a video wall to demonstrate *Grand Prix* racing games, with a couple of McLaren racing cars to complete the effect, and has invited a host of star names to its Electronic Music Theatre. Peter Gabriel is one of those due to attend.

• Left: The new STE on show for the first time in Britain

• Right: The Lynx colour hand-held



SHOW ON EARTH

of ATs, and is hinting at 'surprise products and announcements'. On the stand will be a new 386SX, PC-FAX and the XT range, Open Access II being bundled with the hard disk PCs to provide seven applications.

NORTH PACIFIC COMPUTER TECHNOLOGY is launching a 25MHz Cache 386 at the show, the NP386-25/37 Cache. **CAS COMPUTERS** has a new range of 386-based systems at under £800, a 32-bit cache for less than £1,000 and a range of 10 megabit per second Ethernet cards on offer at £100, claiming these prices are cheaper even than direct importing from the Far East.

Other interesting 286 and 386 machines in the Business Hall will be coming from **WALTERS**, **SAMSUNG** and **TULIP**, where they will be linked into Tulip's Isolan Network. Among Tulip's new models will be the LT286, an AT laptop. Walters will be there showing off its XT, AT, 386 and portable systems. **VIGLEN**'s range will also be on show.

Networking features strongly, reflecting industry trends towards increased use of networks. In addition to launching several entry-level products, will be demonstrating various configurations of industry standard and MCA PCs running within **OLIVETTI**'s MultiLan network. Its latest 80386, the 33MHz M380 XP/9, will be installed as a file server. Sagesoft is introducing an enhanced version of the MainLan system announced at last year's show, as well as a new version of *PC Write* and their *Job Coster* program. **NINETILES** has a ring-based LAN for PCs and PS/2s on its stand, which it claims will operate at a file transfer rate of 20 seconds per megabyte! **SYSTEMS UNION** is giving an OS/2 version of SunSystems its first public airing, this version allowing both *SunAccount* and *SunBusiness* to support LAN manager.

Free independent advice services are now a traditional feature of the show. On the **MICRODECISION** stand there will be an Applications Advisory Service, and the **EUROPEAN FEDERATION OF MICRO-SYSTEMS CENTRES** will run hardware and Software Clinics. Visitors will be able to discuss their business requirements with an impartial

computer consultant, find out about training and support, identify suitable products and even retrieve articles from an online database containing two years' worth of back copies of 25 magazines, none of them *New Computer Express*.

PC DEALER, PERSONAL COMPUTER and **PCW MAGAZINES** are giving a series of short seminars on key concerns to their readers. Each session will be followed by questions and answers led by a panel of leading editors and industry experts.

Future Publishing will of course have a stand at the show. There'll be someone from each of the magazines we publish - **AMSTRAD ACTION**, **ST FORMAT** and **AMIGA FORMAT, PC PLUS, 8000 PLUS, MACPUBLISHING** and our new **Sega** magazine, **S**. And, of course, **NEW COMPUTER EXPRESS**! Come and see us on stand 2218.

EQUINOX has moved from the Leisure to the Business hall this year to launch a new CAD graphics package and show the latest version of *SPA Extra* accounts with features such as flexible invoicing, stock control, and multiple companies.

PSION is back too to introduce facilities for password protection, weekly at-a-glance diary, notepad and international dialling to the Psion Organiser II. Two new flagship models will be on show, the LZ and LZ64. These have a 4x80 screen up to 64K RAM and datapaks up to 128K.

LOGICRAFT and **NYBBLE COMPUTER SERVICES** are both launching 286 laptops, the

COMMODORE is expected to launch a new 386 machine in addition to the Amiga 2500, a straight upgrade of the 2000 graphics workstation. For small businesses, Commodore is announcing the PC 30 series 3, a budget version of the PC 40 series 3. Commodore's Consumer Division will also be announcing new products throughout the show, including the new Commodore 64 Bundle for Christmas, the 3D Laser Pack. There will be 'major product announcements' concerning all platforms, but no details are being given until the show.

AMSTRAD will be featuring its new Amstrad modem and, on the leisure side, demonstrating the Sinclair ZX Spectrum Action Pack complete with light gun, joystick and six computer games enabling the user to shoot directly at the screen. Also on the stand will be the IBM compatible Sinclair PC200 Professional Series with built-in colour TV interface.

former's with detachable white backlit VGA display.

Hong Kong's Trade and Development Council will be there actively promoting the country's desk and laptop computers, including 286 and 386 Compaq clones, LANs, peripherals and accessories.

BEHAVIOR TECH is one of Taiwan's many computer corporations from that country's burgeoning market at the show. The company will be introducing its FlexiStar 286. Coretac and MicroStar, another two Taiwanese outfits, will be demoing their 88, 286 and 386 motherboards, add-on cards and hi-res VGA colour monitors, while Sampo and Lung Hwa Electronics are showing off their micro range.

CHERRY is highlighting its latest generation Mark IV digitiser and range of 'intelligent' programmable keyboards. The digitiser tablet is an A3 graphics tablet for CAD/CAM applications and DTP for £450.

KUMA will be showing off the new version of *K-Spread 3* for the ST and announcing the Amiga version of the same program, which features forms design, macros and printing functions. They'll also have a range of books on the Z88, Amiga and PC and a new application, *Polyfyer*, and a special price promotion on the *K-Roget* thesaurus for PCs, STs and Amigas throughout the show.

Matrix Layout, a desktop programming tool using OOPS (object oriented programming techniques, which should clearly therefore be OOPI) which generates code in Pascal, Microsoft C, Lattice C or QuickBasic will be on display from **MATRIX SOFTWARE**.

THE PC SHOW

PREVIEW

NEXTBASE's Autoroute Plus - the program that finds the quickest, cheapest or shortest routes from anywhere in the UK to anywhere else - will be on display with a few new add-ons including postcodes, gazetteer and 'optimisation module'.

PENNY & GILES will have a new mouse on show which has a keypad incorporated, enabling quick data entry into spreadsheets. There's also 'Fingermouse', a solid state mouse that needs no operating space and has no ball. You wiggle your finger to simulate the movement of a mouse.

VINE MICROS hope to be demonstrating a PC EGA genlock, with a VGA version for later in the year. They'll also be showing their TV adapters that give PC users CGA or EGA on the television screen.

ARNOR, publishers of *Protext*, will be launching *Prodata*, a new database program for the PC, ST and Amiga. It is designed to complement *Protext* and to stand alone. The latest versions of the word processor will also be on show for the PC, ST and Amiga.

Archimedes owners will be interested in what **WILD VISION** have to offer. There'll be expansion cards for the Archie enabling genlock and video overlay, and frame stores that can capture and store video images in real time. The Archie as an image processor is claimed to be several times faster than similarly priced PC setups.

The **ROYAL BANK OF SCOTLAND** will be demonstrating *Royline*, its desktop banking system. It enables users with PCs and modems to do all the normal banking facilities - balance enquiries, transfers, payments etc - from their own PC.

DICTAPHONE, which provides on-site maintenance contracts for Amstrad, Opus and Tandon PCs, will be promoting their services at their stand. **GRANADA MICROCARE** will also be on hand to give details of their on-site maintenance service for BBCs, Unix workstations and Archimedes.

Book publishers **SYBEX** promise new titles on 1-2-3 release 3 and Turbo Pascal plus all their best sellers with particular emphasis on the Mac, C, Unix and IBM PC software. Microsoft Press also will have new volumes on QuickC, QuickBASIC and MS-DOS Extensions, along with 'Desktop Publishing by Design' for users of Aldus Pagemaker. Glentop will have new books on Ventura 2 and MS-DOS 4.

MANNESMAN TALLY, the printer manufacturers, will have their new MT91 bubble jet printer and the low cost MT905 laser printer on sale at the stand of RTS Technology, one of its distributors.

MICROCOM SOFTWARE will be debuting two new comms packages for the Mac, which allow the machine to communicate directly with other Apple users and IBM mainframes.

One of the cheaper new products on sale will be *Maxiprint*, a ribbon re-inker that claims to increase the useful life of any fabric ribbon by 50 times. There'll be competition in the form of **CASPELL**'s *Ribbon Refresh*, though.

PC Users can check out the **IBM USER GROUP** which will have a stand at the show, and learn about the PD library, training facilities and local groups it runs.

Finally, no marks to the company (which shall remain nameless) that says in its press release that its new comms product for the PC 'allows for high-speed, error free communications (sic)' anywhere in the world....

THE PLAY'S THE THING

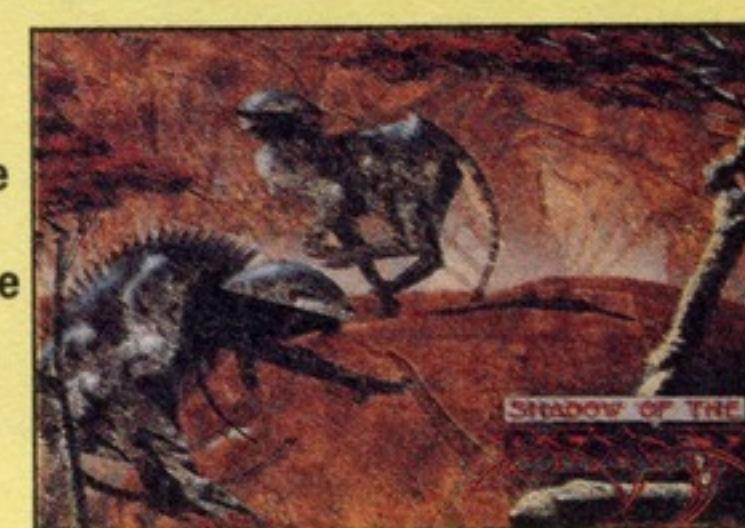
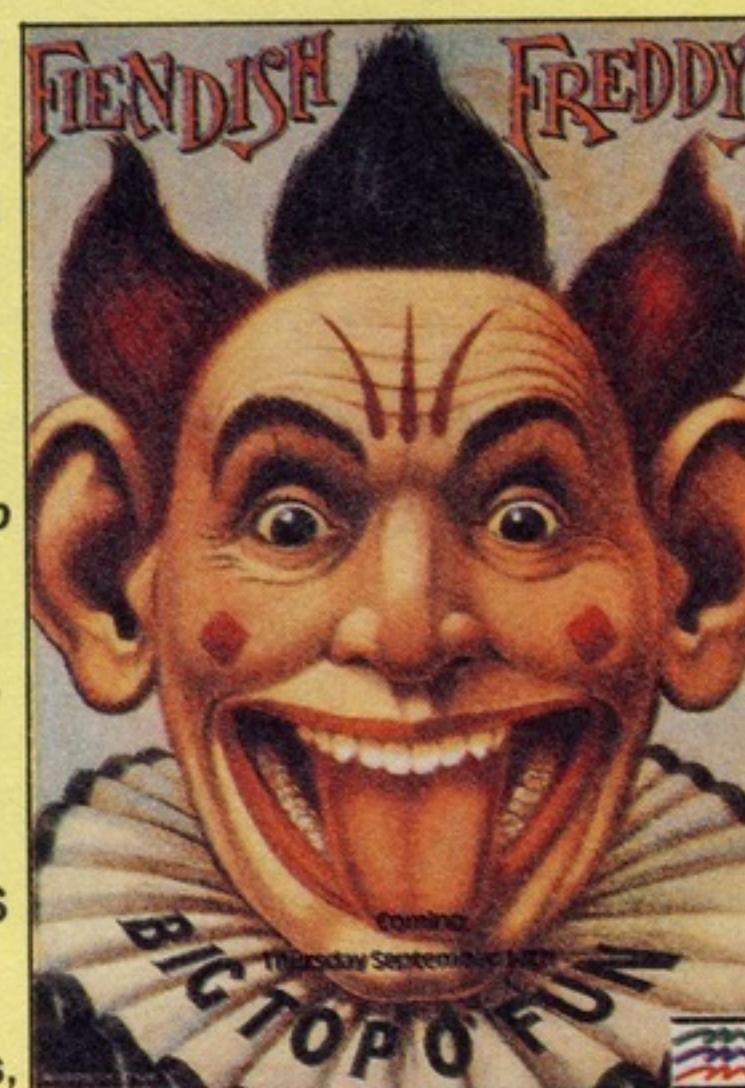
Games players have plenty to keep them busy. **US GOLD**, with their latest arcade machines, will be there, along with **OCEAN**, **MASTERTRONIC**, **KONIX** and **PSYGNOSIS** previewing their Christmas products.

US Gold's Arcade Hall of Fame will have *Gauntlet*, *7200* and *Outrun* waiting to be played - just head for the longest queue. There are also 'the latest and greatest' arcade machines promised too.

Having joined forces with US games publisher First Star to attack the eight and 16-bit video games console markets, Psygnosis is back at the Personal Computer Show. Four PC titles recently launched under the Psygnosis label will be demonstrated, including *Ballistix*, a ball game played on 130 pitches with splitters, tunnels and crowd applause. Psygnosis is also planning two big Amiga launches at the show: multi-level arcade game *Aquaventurer*, which moves solid objects around a 3D playfield, and *Beast*, an arcade adventure featuring ultra smooth parallax scrolling.

Spanish publisher Microdigital Soft has three releases lined up from **DYNAMIC**, in addition to the PC version of the *Navy Moves* mission to destroy a nuclear submarine. The three new titles are *Grand Prix Master*, the latest *Freddy Hardest* adventure *South of Manhattan*, and *After the War* - nothing to do with Frederic Raphael's recent ITV series, but a game in which the player tries to escape from earth after a nuclear war.

On the **INTERCEPTOR** group stand, the **Pandora** label has a role-



playing 16-bit Christmas release called *Project Xenomorph* lined up. From the same team that produced best-selling *Galdregon's Domain*, *Xenomorph* promises impressive 3D graphics and fully animated alien lifeforms and mutations. *Pandora* is also launching *Debut*, a game about experiment in space, plus three mid-range 16 bit shoot-'em-ups: *War Machine*, *The Gladiators* and *Outland*. On the Premier budget label, several eight-bit games will be previewed, including the latest *Joe Balde* epic.

CDS SOFTWARE also has a range of new titles, including the *Sporting Triangles* quiz and *European Super League Football* for a family audience, and a selection from US-based **ARTWORK** for adults. The latter includes *Strip Poker* and *Centrefold Squares*, described as 'naughty but nice' by the company. Software house **HEWSON** will be previewing titles due out in October and November, such as *Onslaught* for the ST and Amiga, *Stormlords 1 & 2*, and *Scavenger* from John Phillips, author of *Eliminator* and *Nebulus*.

Meanwhile **MINDSCAPE** will be premiering four new titles: *Star Trek V*, *Harley Davidson*, *Fiendish Freddy* (which features a bad clown) and *Life or Death*, where you are a rookie surgeon performing appendectomies on hapless patients. Can American hospitals really be like this?

INFOGRAPHES is also returning to the show with this year's Christmas previews.

ACCOLADE, the US games outfit, will be premiering three titles signalling their break into adventure and role playing.

Conspiracy: The Deadlock Files, *The Third Courier* and *Don't Go Alone* will complement their existing cycle sims.



POQET PC

• £1295 + VAT • Poqet 01 405 8755

Since the dawn of the consumer electronics industry miniaturisation has always been the yardstick by which to measure new equipment. Tiny calculators, watches and TVs have all made it to the high street 'technology' shops, and now it would seem the IBM PC compatibles market is to be the next great miniaturisation challenge.

First into the market with a hand-held computer running MS-DOS was Atari with its Folio. About the size of a Filofax, the Folio has a flip-up lid housing the screen and speaker and a QWERTY keyboard. Unfortunately, once the media fuss over the machine had died down it was quietly announced that the Folio wasn't in fact PC compatible. One or two well-behaved programs will run, but you can't just boot up your favourite spread sheet or database and expect to solve your financial problems on the morning train to work.

Poqet, a company based in Sunnyvale, California, decided after a lot of market research that what the PC market really needed was a truly portable, fully PC-compatible computer which had a sensible battery life yet could be slipped into jacket pocket, bag etc., and to that end, the company began to develop the machine that was launched this week as the Poqet PC.

Hard facts

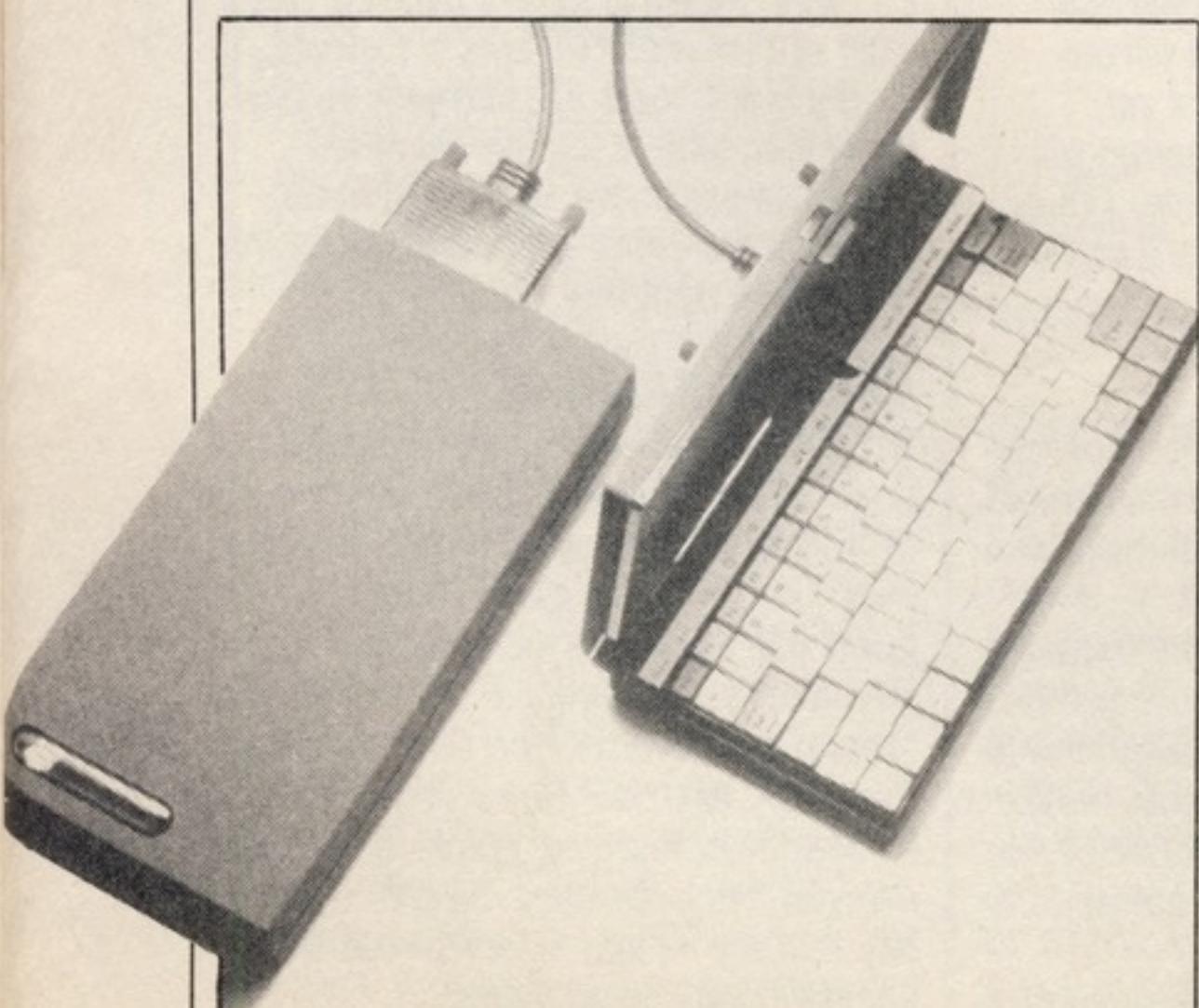
The Poqet PC is a slim device slightly longer than a Filofax, weighing only one pound. The computer is powered by two standard AA batteries with an average life of an amazing 100 hours. The display comprises an MDA/CGA-compatible 80 x 25 Supertwist LCD screen which also provides contrast controls to enhance legibility at any angle.

There's a PC80-style keyboard which although small, features fully sculpted, full travel keys, 12 function keys and an embedded key-pad. At the heart of the Poqet PC is a 80C88 CMOS CPU running at 7MHz, 512K RAM as standard and DOS 3.3 to make use of all the power.

The RAM can be increased using solid state memory cards and software is to be supplied on ROM cards providing instant application loading of up to 2MB and access around 300 times faster than equivalent hard drive operations. Using applications from ROM means that around 75% of internal RAM memory is free and available.

Which pockets?

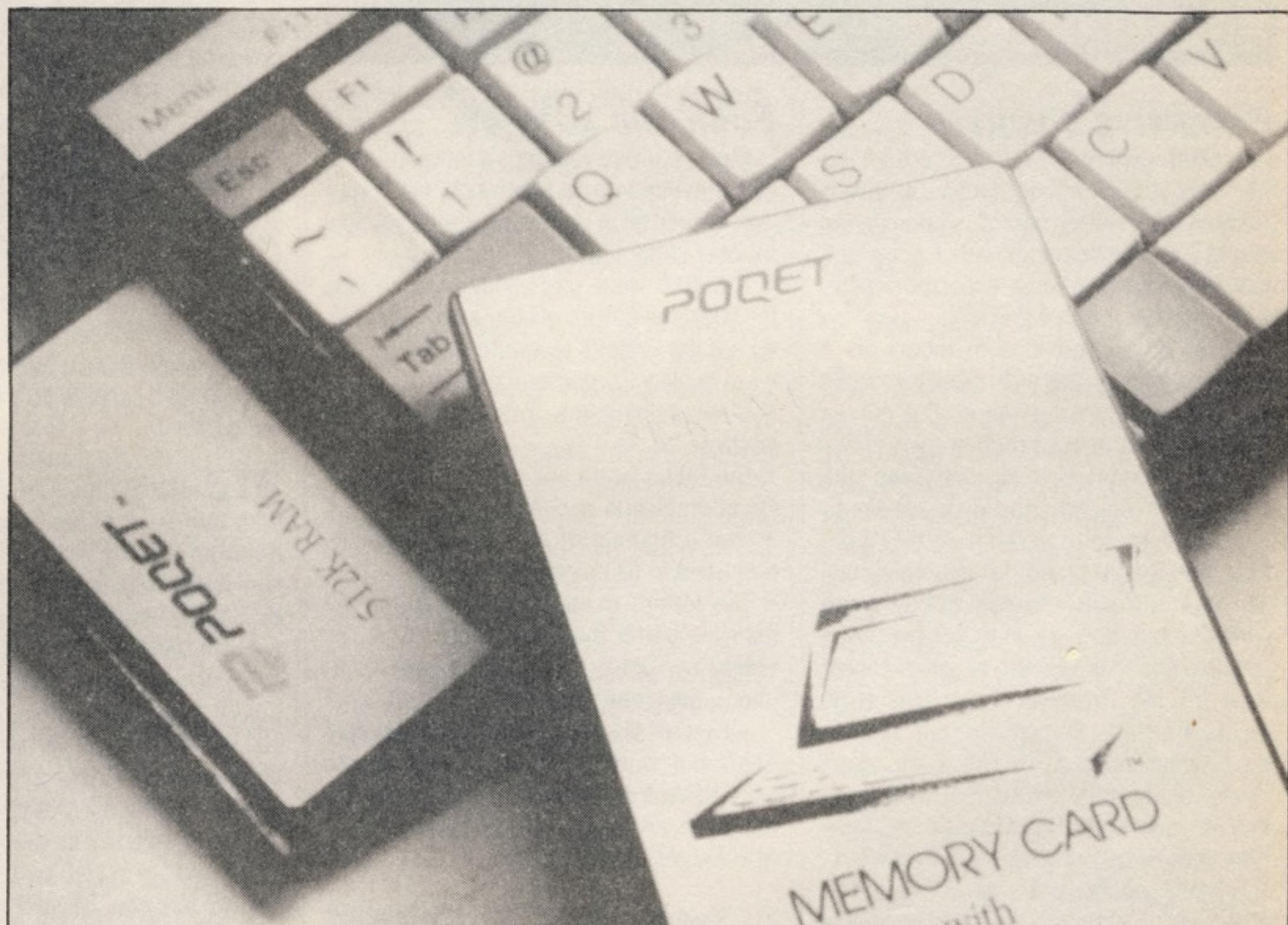
Who will buy the Poqet PC? Everyone who needs an IBM compatible computer which they can use away from their home or office desk. Until now, portable PCs have required the prospective user to have the biceps of Fatima Whitbread in order to lug the thing around. With 30 pounds of PC compatible hanging from your arm, you don't want to go very far.



• With a portable disk drive (keep it in the glove compartment perhaps?) data transfer is no problem for the Poqet PC

THE PC OF THE FUTURE

In the wake of the launch of the tiny Poqet PC, Express's technical editor Jerry Glenwright looks at the implications for the PC world



• Poqet's miniature PC opens up whole areas of computing on the move which were previously impractical

Opening the average portable on the train means that your fellow passengers have to be either very small or very accommodating. For the busy executive, salesperson or commercial traveller so much valuable profit garnering time is wasted in travelling from A to B. Using the Poqet PC, customer lists, accounts, letter writing and final reminders can all be computed while you await your arrival thereby increasing your efficiency by leaps and bounds.

Information essential to business persons can be with them at all times without the fuss and inconvenience associated with existing portables and their battery life problems. Estate and insurance agents, surveyors, sales and business persons will all benefit greatly from the ability to take their office PC with them wherever they go.

New horizons

The Poqet PC looks set to steal sales from Atari's Folio. The machine is truly IBM PC compatible, has a sensible battery life and innovative memory management. A full size screen means that unlike the Folio which is limited to spreadsheets, word processors and the like, the Poqet PC can run games and graphics software, in fact anything requiring an 80 x 25 display.

True, the machine is a little expensive at the

moment, but if sales take off, then we can expect large price reductions in a year or two.

When launched, the first calculators cost many hundreds of pounds and only those with bulging purses could afford them. Now they're given free with a gallon of petrol. Maybe in a couple of years you'll pop around to the garage to fill up and come away with an CGA pocket PC. ●

TECH SPEC

- 80C88 CMOS central processor running at 7MHz
- 512K RAM, expandable with add-on memory cards
- 640K ROM built in
- 80 x 25 MDA/CGA-compatible Supertwist LCD display
- RS232 port
- User expansion port
- Powered by two AA batteries
- MS-DOS 3.3
- Size: 22.22 x 10.92 x 2.34cm
- Weight: Approximately one pound including batteries
- Battery life: Approximately 100 hours

EXPRESS MAIL

Dear Reader

Another collection of comment, controversy, compliments... and Rob Ainsley's replies. Have you got something to say? Make your voice heard in computing's liveliest letters page! Send your contributions to:

Express Mail, 4 Queen Street, Bath, Avon BA1 1EJ

PS. Sorry, but we just don't have the time to give personal replies, whether you include an SAE or not. We're too busy putting Express together!

EXPANSIVE BUSINESS

So called expansion disks seem to be the new trend in computer software today. A whole new market is opening (or should I say re-opening) with Falcon and now Populous, featuring expansion disks to fit onto the original game.

This is a good idea in theory as a game may never get out of date and can be improved upon each time. But are we really going to get our money's worth?

The Falcon Mission Disk and the Populous Promised Land disk appear to be more than up to scratch as they both offer new features and better game play. I for one am quite pleased to buy these products but only as long as the price remains sensible! £9.99 is an excellent price for the Promised Land and so is the £19.99 for Falcon Mission Disk 1, the original being £30. But if we aren't careful many software houses will see a popular game an opportunity to make more money by bringing out an addition.

These could prove to bring a few added aliens or levels for anything up to £20. What we gamesplayers must be on the lookout for is expansion disks for brilliant games, as they might turn out to be a rip off, the software houses assuming we'll buy it just because it bears the name Elite or Xenon.

I wait for the new Kick Off expansion disk with bated breath.

Michael Harris, Taunton, Somerset

• Quite agree. Expansions disks so far have been a good way of extending your enjoyment - let's hope the hype merchants don't move in.

SNIPPETS

THICK AND THIN

Come on, what's this 'Shopping Express', shouldn't it be called 'Book of Adverts'? It was thicker than the magazine itself!

Keith Grant, Reading

• How can Shopping Express, which is a part of the magazine, be bigger than the whole maga-

zine? Next week we'll have a floor plan of the Tardis to demonstrate.

TOP TEN RAVE

Why scrap the Top Ten? It's superb! JC Keilaus, Uxbridge, Middlesex

• Superb! I thought it was rubbish.

TOP TEN HATE

Thank you for stopping the 'Top Ten Hates', as it was our No. 1 hate, it was becoming a stomping ground for egotistical maniacs. Urok & Hazel, Leicestershire

• Oh. I thought it was very good.

when I started work there, that there was a wholesale copying of packages and usage of those copies within the department I was working for.

But what really annoyed was that it was encouraged by the manager and when I mentioned it, I was told unless I wanted to rock the boat to keep quiet. The practice consisted of buying one or two copies of a software package (the ones I saw were MS Word IV, Sidekick, SAMNA, PC-TOOLS, MS Pageview and others) and promptly copying them onto all the PCs in the department (about 20-30) thereby saving a few thousand quid.

My problem consists of that when I informed the agency I worked through of what was going on (stupidly) he reported back to me that the manager had told him I had signed a secrecy form and that they could sue me if I disclosed any secrets to anybody else.

Is that possible? Should I report this to FAST, the software firms or what? Lastly what encouragement is there if large firms practise piracy and wouldn't it help if maybe there were rewards for dobbling in these scumballs however powerful the company they work for. Name and address supplied

• The secrecy agreement means you must not reveal anything to the press, so I'm afraid if you did reveal anything you'd be in breach of the document you signed.

However, we're contacting FAST on your behalf. The odd copy here and there nobody really minds, but wholesale ripping off, as seems to be going on here, is not on.

STE HEE

With the news of the imminent launch of the Atari STE no doubt there'll be one or two Atari fans saying things like "that'll knock the smile off them smug-faced Amiga owners". Not so! As an Amiga owner I'm quite chuffed at the release of this new machine for two reasons:

1. It proves what everyone said about the ST being a 16 bit Spectrum with no decent hardware

2. Ported over games won't be so awful!

But will this new ST sell? At £499 for the 1 meg version, it doesn't appear to be a good deal - What with the Amiga 500 plus a half meg upgrade totalling only around £425 - And for that price you're still getting better hardware. Too late, Atari!

M Cullen, Birmingham

• I doubt that portovers will get any better, because programmers will continue to write for the ST, which will outnumber the STE for many years yet. Hopefully these double-sided games will come out (ST version on one side, STE on the other) but I don't think there'll be that many. Anyway, we shall see.

YOU'RE NICKED

I was astounded to read in Techtips column, the response to correspondent Richard Meredith's request for help with a software problem.

Having asked for help with loading a game, the response of your columnist was first to accuse him of using pirated software, and to then state that he was passing the name and address of Mr. Meredith to the Federation Against Software Theft.

Since when has it been the role of a computer, or any other magazine for the matter, to become judge and jury in accusing readers and contributors of

theft? You constantly moralise over the issue of software piracy, and clearly champion the cause of the software industry in precedence over the end users.

I feel that your columnist should withdraw his accusation of theft forthwith from Mr. Meredith. Please remember that you owe respect to your readership. Do not continue to treat them with such contempt.

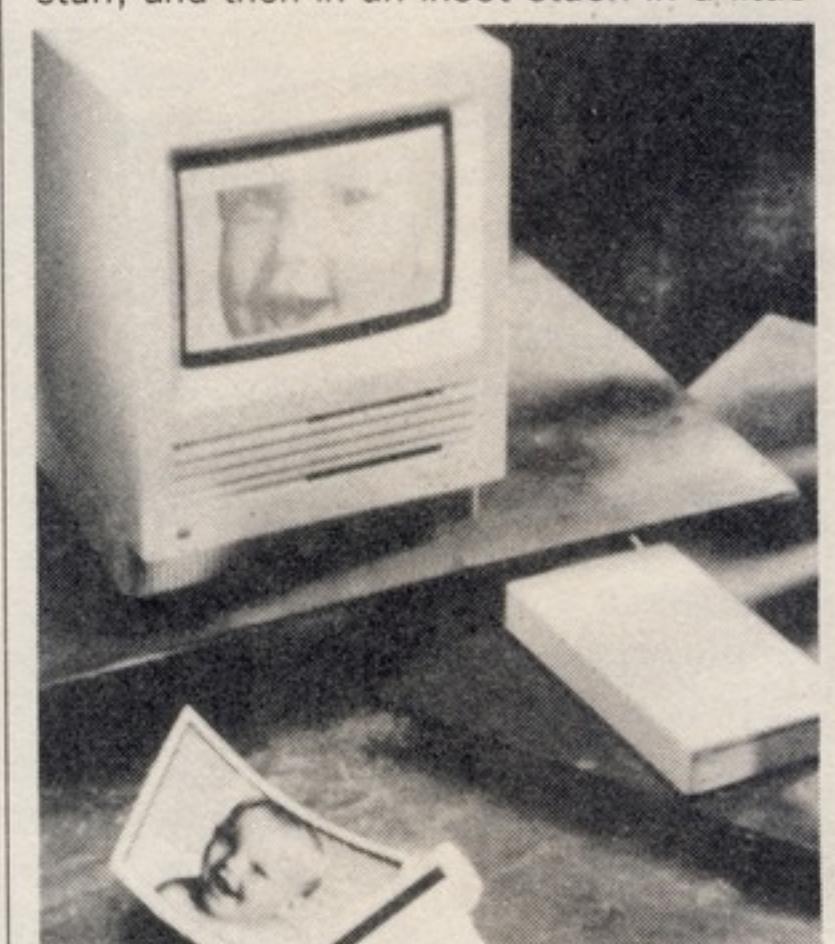
Ray Best, Nottingham

• It is still unclear whether Rogue, the program in question, is a PD program or not, and whether Mr. Meredith was a pirate or not. What is clear, however, is that you're taking what was obviously a tongue-in-cheek reply far too seriously.

PC PORK

When you started, you used to cover all the machines very well, dividing all your 'big' features between the formats with a fairly even hand.

Now, I'm afraid, you're starting to follow the standard prejudice that the PC is the only computer with any 'serious' software worth reviewing. Normally, you will do a two page review of some PC stuff, and then in an inset stuck in a little



• Let's have more reviews of Mac software, says Ian McCall

corner somewhere, there is a section cheerfully marked 'So what's available for the other machines?', about three paragraphs long. This is not good enough, and only helps to maintain the mystique surrounding the PC.

How about the odd review for the Mac? With all the growth in emulators you'll be catering for more than just the owners of actual Apple Macintoshes.

Ian McCall, Sheffield

• Well, we try to keep a balance, and I can't see too much PC bias in Express. As for the Macs, there are currently so few home Mac owners (mainly because they're so expensive, dammit) that we feel it's a market to address in the future rather than right now.

ENGINE FAILURE

The Gameplay section in Express 43 featured three PC Engine game reviews - all of which you seemed to go bananas over. OK, so the games may be very good but there was no need for all the silly and self righteous comments like "There are no plans for Gunhed on any major UK micros. None of them could handle the sound and graphics anyway". Are you self appointed experts trying to say that the Amiga couldn't beat the PC Engine? Don't be so stupid!

Graham R

• No, we're not trying to say the Amiga

couldn't beat the PC Engine. We're succeeding in saying the Amiga couldn't beat the PC Engine. The reason for this is because the Amiga couldn't beat the PC Engine. I hope this isn't too complicated for you.

PIRACY LAWS

I am at present in my fifth year at school studying for my GCSEs. We have been allowed to choose our own subject for our General Studies project. I have decided to cover software piracy and the laws concerning it. I would be most grateful, therefore, if you could give any information you can give me on this subject such as; copyright laws, any literature available on this subject etc.

James Meeson, Devon

- Well, I'm afraid we have nothing. Try your local library, or in an emergency, try the Home Office.

AD NAUSEAM

Last week, you gave away free ads. A laudable scheme, I'm sure we all agree. This week, we see the first of the ads. Nearly 20 adverts for 'contacts wanted.' 'No beginners please.' 'Fast and reliable.' Now, I'm sure that they all just want friends to swap PD with, and the fast and reliable is because they like letters. Beginners aren't wanted because obviously they haven't got into the habit of writing long chatty letters.

Come on guys, if you want to maintain your stand on software piracy, you could do worse than have someone chuck out the more dubious ads. I mean, it's not as if they're paid for, is it?

Finally, the next time someone starts this 'my computer's better than yours, and yours sucks so nyah nyah nyah', I will mention that my computer has 24 megabytes of memory, and over 20 Gigabytes of disk storage, and a proper multi-tasking operating system, so there! Gavin Syme, Edinburgh, Scotland

- We'll monitor the ads as closely as possible, but with nearly a thousand to go in an issue, we can't guarantee to check every single one out. If anyone comes across people pirating software, tell us! Name these guilty men! (and women).

IT SEUCKS

In letters (Express 44) I have just read a small comment which completely slags of SEUCK on the Amiga. The point I want to make is that everything Phil D says is correct and having seen the program in question, I completely agree with him.

What I want to know is why your review didn't warn the potential buyer of the faults? After all, the review is only to tell the public what it is like so we can decide if it is worth buying. The review was full of what was basically waffle.

You gave it the full five stars. Three stars would have been okay.

It could have had support for 32 colour, PAL (not the stupid small NSTC) overscan, with sprites. You could have used a phrase like "Scrolling isn't very good, considering Amiga has hardware scrolling" and "Would have been nice to be able to use hardware sprites."

What really got me was seeing it slow down when a few sprites get on screen. Sloppy or what! I would have expected more from an ST and I have seen over 70 sprites bouncing smoothly about on a C64, with music, colour cycling and no hint of slowing down.

The sad thing, is you failed to tell us

enough. If I hadn't seen it already, I could have wasted my money.

Richard Dunn, Hedon, East Yorkshire

- We take your point, and are glad to publish your opinion, but on a freelance review we can only take our reviewer's verdict in good faith.

MAKE £££££££

For some time, I've been trying to think of ways to earn some cash from home on my micro. I've seen ads for "Make money with your micro" but before I shell out the obligatory tenner, I thought I'd get some advice from your mag on this subject. (I'd hate to pay out my hard earned just to find I'd paid for a real rag). Any recommendations would be much appreciated, as I'm becoming more skint by the day.

JC Keilaus, Uxbridge, Middx

- Well, never having seen one I don't know, but we'll try to do a feature on it in the future. Being a suspicious type I wouldn't touch any of them, but I'd be curious to hear if anyone has made money out of them.

TYPE CAST

I feel I must complain about the stereotype images of non-computerate mongooses your magazine seems to think it amusing to portraying. I myself am not a mongoose, but I do have a mongoose as a pet who programs fluently on a 286 development system being responsible for many commercial titles. Who do you think wrote Trip-a-tron? Jeff Minter? Not likely, it was my mongoose, Mongy.

Colin Brown, Birkenhead, Merseyside

- One day I'm going to make a fortune by publishing the Oxford Dictionary of Plain Speaking, and under 'mongoose' it'll just say 'vicious little bastard that scraps with snakes'.

THE INCREDIBLE VOYAGER

Just thought this was interesting!
Stephen Shernin, Belfast, N Ireland

In the world of high technology, it is hardly surprising that a 12-year-old machine looks old-fashioned...

[A newly designed version would have...] say, one megabyte instead of Voyager's 65 kilobytes.

THE ECONOMIST,

Sep 2 1989

- 64K? What would the pictures have been like if they'd had an Amiga on board? (All together now: I don't know, it would've crashed just after starting up!)

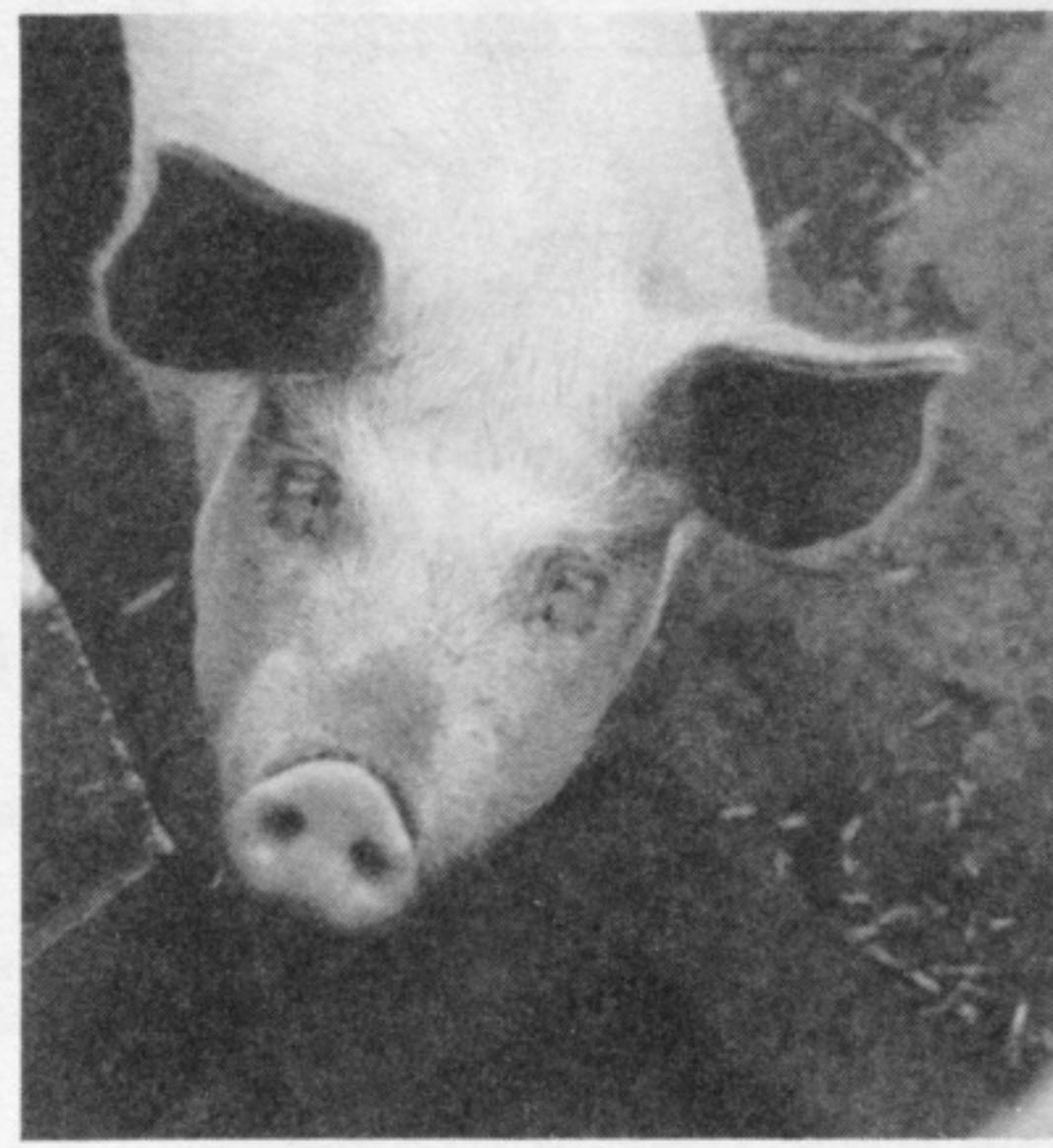
BACK SLAP

Please help me. I have every issue of Express except 13, 27, 31 and 41. Seeing as your back issues service has completely disappeared from your magazine. I am finding it difficult to obtain these four issues and complete my collection. Could you either:

- Bring back the back issues service, or
- Send me issues 13, 27, 31 and 41.

Ronni M Stirling, Ruchill, Glasgow

- Back numbers are always available from The Old Barn, Somerton, Somerset,



TA11 7PY, for 75p each including p&p. Issue 13 might be sold out, but the others should be OK. Good luck - your complete collection will be worth, oh, thousands of pounds one day!

LESS DEBATING ON A MASS SCALE, PLEASE

How about removing all the letters on the "my ST is better than your 486 PC, and my Amiga is better than your ST etc etc ad infinitum..." subject as it is becoming very tedious.

New Computer Express is an excellent package offering a wide range of news and features. It is also very easy to use and very user friendly with only one or two minor bugs. It offers great value at 58p an issue when compared to the glossy ad-sheets which pretend to be monthly mags. Hopefully Express will never crash or 'bomb-out'

Urok & Hazel, Leicester

- Well, a lot of people do like the gratuitous insults and invective that the debate engenders, so we'll keep it for the meanwhile.

I hope Express will never crash or bomb out too, for the sake of my Access bill.

RUBBISH POEM

The Jokers my name,
Vicki Vales my dame,

PEDANT'S POINT

(strictly, not a point but an area)

TO BOLDLY SPLIT

I just have to take the Michael, as for the second time I have seen reference to someone spending time 'pouring (sic) over a computer'. What intrigues me is, just what does he pour? His heart out? Hot treacle? Custard? (See Tutorial Issue 43).

Could it be that he 'paws' over his computer as does an animal over his food, or is it that he 'pores' over his computer as does a student over his books?

Generally speaking I find Express writers to be pretty good at the use of English grammar and spelling, and they do not confuse words like 'there' and 'their', 'here' and 'hear', the exception, in common with a

great number of people to-day, being in the use of 'either' when meaning 'both' or 'each', and in splitting infinitives. Both these very common mis- usages jar upon me like a musical discord.

Forgive me for pedantry, but I like the English language and do not like to see it corrupted.

Don Fordon, Sheffield

THE PRICE OF FARM

We run a smallholding using PCWs and have named one of our pigs, a Gloucester-Middle White cross, 'Basil' after the PCW Patch columnist. Here is his picture. Keep up the good work, Express. Sue Macdonald, Hereford

- Absolutely no resemblance, of course. Oink oink snuffle oink grunt snort OINK OINK snumph grff oink snff grphh scronk grunt scnk smff OINK grunt

The ST is great, the Amiga is not, I kid you not.

I love to hack and copy games crack them and ruin them in front of her. So to all you Batfans, fear me from far, I'll crack your game and I'll nick your car. The men in the Ocean, Will never know me, My ST and me is all there is to me. Ha Ha Ha Ha Ha Ha The Joker

- Utter crap.

CROSSING THE SEVEN

So Paul Gregg thinks there are more than seven colours (Express 43). Well Paul, if you hadn't been so busy playing your computer, you would know that there are only seven colours. All else are termed hues and it depends on saturation and intensity as to how we see them. Actually colours and hues do not exist at all, and they are just a figment of our imagination.

Colours outside the visible spectrum for the human eye - absurd, Irish blarney indeed!

M Knight, Bolton, Lancs

- Colour's just a figment of our imagination? Try telling that to FW de Klerk... (little bit of politics, my name's Rob Ainsley, thank you and goodnight)

READ ALL ABOUT IT!

The traditional typewriter is not the only thing to take a battering at the hands of the home computer – the publishing industry itself is undergoing a revolution.

Currently most of the pages you see in magazines and newspapers are made up on drawing boards. The artist responsible for the page's design will decide on the size and position of pictures and headlines, and then tell a sub-editor how many lines of copy are needed to fit. The sub will then edit the text – usually on a VDU – insert codes at strategic points to indicate different text styles for cross-headings and so forth, then have the text printed out in a long strip one column wide by a typesetting machine. The artist will then take this strip of text, cut it into smaller pieces and manually stick it down on the page.

Desktop publishing software lets you do all this on a computer. 'On-screen page make-up' is the technical term. Instead of messing around with scissors and paste you can move boxes, pictures and words around on the screen, only printing the page out when you have a layout you're happy with.

No more than meets the eye

The whole business revolves around the principle of WYSIWYG. Not as the name suggests either the small, unidentifiable piece of plastic which falls out of every MFI flatpacked video cabinet, or indeed a variety of motorised hairpiece, WYSIWYG in fact stands for What You See Is What You Get. A WYSIWYG program will show text on-screen exactly as it is printed. So text that is underlined will appear underlined, for example. Headline type will appear headline-sized on the screen and so on.

Desktop publishing (DTP) programs are in fact like extremely complex wordprocessors. If you wish to duplicate the layouts you see in newspapers and magazines you need to be able to use different text sizes, different fonts (typefaces) and multiple columns. And when you insert or allow space for pictures, you want the text to flow round them automatically. Making page layouts is an exact art – hence the importance of the WYSIWYG display.

Money talks

Unfortunately, while most machines can run word processing software quickly and efficiently, desktop publishing software is a different kettle of fish entirely. The display must be able to show text in a variety of sizes and styles, draw boxes and lines, even show electronically imported pictures – all in the highest resolution possible. The screen must also be updated rapidly every time you make a change if the program's to be at all useful.

This makes great demands both on the computer's memory (RAM) and its main processor. DTP programs require great quantities of memory

IN BRIEF

- Desktop publishing (DTP) programs are like highly complex word processors that let you design whole pages of text and pictures on-screen
- DTP is taking over from traditional "cut & paste" page layout
- DTP software is available even for budget eight-bit computers like the Amstrad PCW and CPC
- For best printed results you need either a 24-pin dot-matrix printer (expensive - £400+) or a laser printer (very expensive - £1,000+)

You thought word processors were hi-tech? Rod Lawton explores the paperless world of desktop publishing...



– both the pages you create and the program itself take up a lot of storage space – and drawing the complex page displays on-screen involves a great deal of heavy-duty computation for the processor.

For this reason, budding Robert Maxwells may well end up having to pawn the car and sell the kids to pay for it.

However, although you might need to invest large amounts of money if you want to compete with the big boys, you can achieve somewhat more modest results at spectacularly reduced prices using ordinary home computers. The results might not be good enough for a national glossy, but they'll be more than adequate for the parish newsletter.

Quite competent DTP software is available even for the Amstrad PCW and CPC machines, while the more powerful Atari ST and Commodore Amiga will run some quite impressive programs. PC-compatible machines are also well-supported with DTP software from a number of companies. Best of all is the Apple Macintosh range, which starts, however, at around £1,100. The results, though, are of truly professional quality. Indeed, all of the magazines produced by Future Publishing – including *New Computer Express* – are made up using £5,000 Apple Macintosh IIs.

The proof of the printing

The computer itself is not necessarily the weakest link in the DTP chain. No matter how sophisticated your DTP program, you still have to print

your pages out – and here the traditional dot-matrix printer is woefully inadequate. These devices are fine for letters, manuscripts and so forth, where the type size is reasonably large and there are no pictures to worry about, but try using such a printer for a newspaper or magazine page and you'll find the smaller print sizes are almost illegible and the pictures break up into gritty, indecipherable images.

For professional publishing you need to make use of a huge variety of typefaces and sizes and that means much finer resolution. Ideally, even on close inspection you shouldn't be able to see the dots making up the image at all. For this you need a laserwriter.

You only need to know two things about laser printers. The first is that compared to ordinary dot-matrix printers they offer absolutely superb quality. The second is that they start at around £1,000.

Glossy magazines require yet more resolution, however – as offered by the Linotronic typesetting machines used to print out *New Computer Express* pages. Costing about the same as a four-bedroomed house, these offer ultimate quality but are for professional use only.

Don't despair though. Many typesetting bureaux exist which will take your pages on disk and – for a fee – print them to professional standard for you. And with the computer technology required for desktop publishing growing ever more powerful and ever cheaper, everyone has the chance to become a publisher. ●

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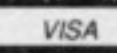
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COMING SOON

Cartons of milk on the windowsill, mugs of coffee, Inter-Rail cards, unwashed plates, gowns, underground political newsletters... and micros?

Preparing essays and dissertations on a word processor has become commonplace, and now you can even get special student bank loans to buy yourself a micro.

Some benefits of owning a micro are obvious, some less so. Word processed work looks so much more impressive than handwritten scrawl, and it's a boon being able to keep everything stored on disk. And for some subjects, especially stats-oriented ones such as sociology and the sciences, computers are a necessity for data processing. But as Leoni Antoniazzi of the National Union of Students notes, there's more to it than that. "Owning and using a computer is a real selling point when it comes to job applications. It's not just for your student days – buying a computer can take you through your career."

Accordingly, the NUS offers a loan scheme which enables students to buy up to £1,250-worth of computer gear on loan. Payments vary, but for a typical loan of £1,000 would be £32 per term – just after the grant cheque comes in – switching to monthly repayments when you leave and get a job.

Loans are arranged through the Midland Bank, and any computer stocked by the NUS can be bought under the scheme – which means anything from IBM PCs to Amigas. "The scheme isn't for people to buy games machines. We recommend students to buy PCs – they're the academic standard," says Ms Antoniazzi, citing the huge range of academic software for the PC. "But Amigas are available too, as many courses – such as art and design – can benefit from them."

Organising a loan is easy and is done at the same time as you buy the equipment. Details are in the newsletter *NSM*, and in the leaflet 'Student Computer Guide'. Both are available from students' unions on campus, or from the NUS on 0457 468003.

Many campus shops sell computers, and their equipment can be bought under the loan scheme. As more and more computer-literate students come up to college, the NUS is hoping that more first years will buy computer hardware. There's a bias towards final year and graduate students at the moment.

Which micro?

For general word processing, the £500 Amstrad PCW, complete with printer, monitor and software is a favourite among many students. But Roger Batty, doing a PhD in ancient history at The Queen's College, Oxford, has just switched from that machine to an Amstrad 1640 plus *WordPerfect* for the massively complex footnote, contents and index generation that his 100,000-word thesis requires. "The PCW seems prehistoric now," he says, "but when I moved it out to the cupboard I felt really bad. It was like chucking a girlfriend."

He recommends the PCW to anyone writing essays, but says a PC plus one of the heavyweight word processors – Borland *Sprint*,

STUDENT SURVIVAL KIT

Scour the mail order ads for the best buys. All these should be widely available. If money is really tight, try the second-hand market – there is plenty of kit advertised privately in Shopping Express.

• MICRO

Any cheap PC compatible such as the Amstrad 1640, Opus or Dolan. The ST is a great buy if you also want to enjoy leisure software, and the Amiga is a good choice for anyone doing an art or design related course. The Amstrad

PCW is a nice all-in-one package and ideal for 'pure' word processing.

• PRINTER

Anything cheap and cheerful, such as the Panasonic KXP1081.

• SOFTWARE

Specialist software, particularly scientific stuff, is advertised in technical magazines on the relevant subject. For essays a simple word processor such as *Tasword*, *1st Word Plus*, *LocoScript* or *Protext* is fine. For heavy stuff – theses

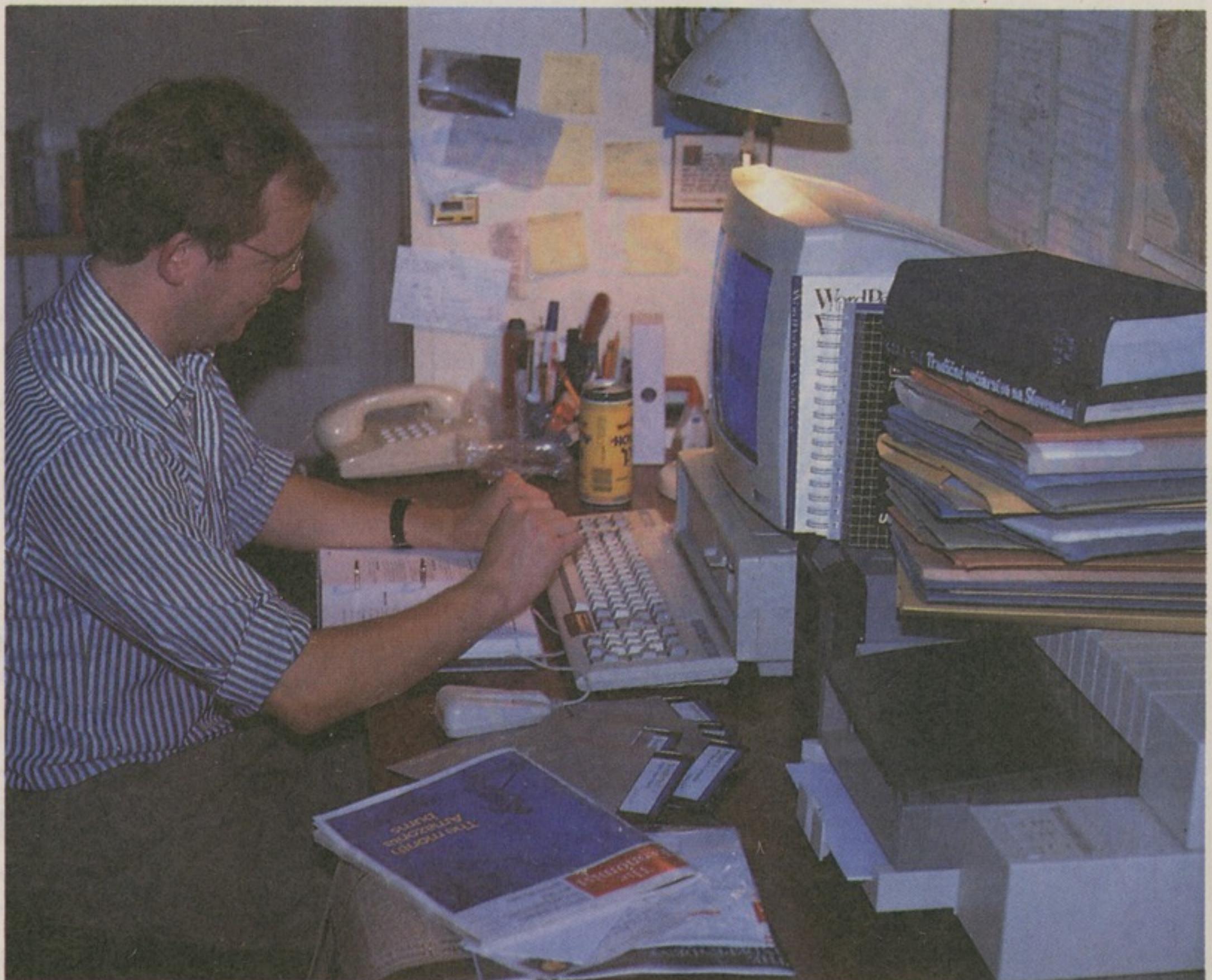
that require footnotes and indexes and so on – you're looking at a £200 plus package like Borland *Sprint* or *WordPerfect*. However your uni or poly will have a PC-based computer room and a word processor like this which you can use free.

• STUDENTS' UNION SHOP

Check out your campus shop for details of the loan scheme – and keep your eyes on the noticeboard for departing students selling off their kit at silly prices.

A DEGREE OF HI-TECH

Computers are fast becoming just as vital for students as the paper and pen. Basil Pigg reports



• All this could be yours – for £32 a month under the NUS loan scheme

WordPerfect, *TopCopy Plus* etc. – is better for graduates.

"The change in recent years has been incredible," he says. "Ninety per cent of graduates use computers now, compared to just a handful of them 10 years ago. And the number of undergraduates using computers to write their essays is increasing as well – it's probably up to 15%-20% now."

The Atari ST has plenty of devotees, with a wide range of academic and word processing software. In particular there are UNIX and DOS emulators, enabling it to run any software for those systems – *PC Ditto 2*, out soon, promises to be a very good way of making your ST run like a PC. There's also a huge amount of PD available for free, including the academic word processor *TeX*.

However, the NUS scheme doesn't apply to STs, and, as John Slater of Bath University stresses, the PC really is the academic standard. There are 2,000 computers in the computer centre there, "nearly all of them PCs, though there are still a few BBCs around," he says. "All the academics have a PC on their desk now."

The number of students with computers is growing, but most of them use the PCs in their faculty. As there are only 3,500 students at Bath, there are plenty of terminals to go round. Students can make use of on-line facilities such as JANET, the Joint Academic Network. With this you can send messages to other researchers, access information in your own and other universities' libraries, and use it as a gateway to other services in America and Japan. Now Bath is putting a number of PCs in the library, so there's really no excuse for not making use of the facilities.●

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● THIS WEEK'S BUYERS' GUIDE

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● **MIDI controllers** ● **Internal sound**

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MUSIC BUYER'S GUIDE

Computers can be of great help to musicians. As well as making noises from their own loudspeakers they can sample sounds and replay them, or control a synthesiser via a MIDI connection.

The borders between music and software are becoming more blurred with music companies investing in both hard and software and software companies working hand-in-hand with music manufacturers. The choice is baffling and growing larger month by month and to some extent the choice of software and its possibilities are marked out by the computer that you choose to run it on. To start the ball rolling, Express gives you a comparison of the major computers and how they compared followed by run down of the best software available across the board.

COMPUTERS

● ATARI ST SERIES

- ▲ Built-in MIDI ports
- ▲ No compatibility problems
- ▲ Large software base
- ▲ Not expensive
- ▼ Some programs require hi-res screen
- ▼ GEM environment can be slow
- ▼ Internal sound chip not very good

● COMMODORE AMIGA SERIES

- ▲ No MIDI compatibility problems
- ▲ Excellent internal sound chip
- ▲ Stereo output
- ▲ Multi-tasking
- ▼ MIDI interface not included
- ▼ Software base not so large yet

● PC

- ▲ Large software base
- ▼ MIDI compatibility problems
- ▼ Poor internal sound chip
- ▼ Interfaces relatively expensive

● ARCHIMEDES

- ▲ Excellent internal sound chip
- ▲ Very fast processor
- ▲ Multi-tasking
- ▲ New models have built-in MIDI interface
- ▼ Small software base

SEQUENCERS

Perhaps the most widely available type of software. MIDI sequencers come in all shapes and sizes from the Public Domain to the bespoke facilities. The usual mark of excellence is ease of use coupled with hosts of labour-saving musically intelligent routines. Hopefully it will also be able to save in MIDI file format so that work on one sequencer can

be transferred to another without tears.

● CREATOR

FOR Atari ST series
FROM C-Lab (Sound Technology): 0462 480000
PRICE £285

Rapidly becoming the most widely used of sequencers it has excellent editing and arranging features. Although not cheap, if you are serious about music then this is the one to go for. It can be expanded with hardware to control up to 64 instruments independently

- ▲ Excellent facilities
- ▲ MIDI file compatibility
- ▲ Will also adapt to video sync
- ▲ Good editing

- ▼ Handbook can be hard to get to grips with
- ▼ Expensive if you are not serious

● TRACK 24

FOR Atari ST series and Amiga
FROM Comus/Soundbits: 021 733 2063
PRICE £75

Well priced budget sequencer with more features than you would expect, rivalling software twice its price. Compatible with their more up-market sequencers and scoring packages.

- ▲ Cheap
- ▲ Good sequencing facilities including Mixdown
- ▲ MIDI File
- ▼ Editing is peculiar

● STEINBERG PRO 24

FOR Atari ST series and Amiga
FROM Evenlode: 099 389 8484
PRICE £285

The industry standard for many years. The soon-to-be-available Amiga version should prove interesting. They are pushing their new program 'Cubase' at present but one should not neglect this easy to use and very popular program. Make sure you get at least version 3 though.

- ▲ Easy to use
- ▲ Established program
- ▲ Easy editing
- ▼ Price

● VIRTUOSO

FOR Atari ST series
FROM The Digital Muse: Audio Software: 01 586 3445
PRICE £225

A new all British program having its first outing this year. Initial reactions are

favourable and it has many things in its favour. It has all the features that are available on much more expensive packages and still remains quite easy and friendly to use.

- ▲ Very fast - thanks to re-writing of screen management
- ▲ Very accurate
- ▲ Can perform disk operations whilst still running
- ▲ Many excellent features
- ▼ New and therefore untested in the general market
- ▼ Price

● K.C.S. 1.6

FOR Atari ST Amiga, Mac and PC
FROM Dr T: 01 258 3454
PRICE £199

Dr. T programs, are nearly all made to run in a Multi Program Environment, which means that you can work on several of them simultaneously. KCS runs on 48 tracks, has loads of features and is the most popular sequencer from their range. It can also have add-on programs to enhance editing features and also music printing.

- ▲ Well established program
- ▲ Upgrades and works with other software
- ▲ MIDI file
- ▼ Editing not easy

● M.R.S.

FOR Atari ST, Amiga,
FROM Dr T: 01 258 3454
PRICE £59

Low cost eight track sequencer that provides a decent introduction to sequencing. Has one or two funny quirks in its operation like defining the song length from the length of track one. Generally quite generous in facilities. The Amiga version supports the internal voices as well.

- ▲ Easy to use
- ▲ Low cost
- ▲ Can be upgraded to KCS
- ▲ Well documented
- ▼ Has laborious editing facility
- ▼ One or two peculiarities in the way it works

● SUPER CONDUCTOR

FOR Atari ST
FROM Microdeal: 0726 68020

Very popular little sequencer that will also control the ST sound chip. Well though out, especially in the song

arrange section. Can also cope with the fine details of MIDI including systems exclusive editing.

- ▲ Suitable for beginner
- ▲ Easy arrange section
- ▲ Well documented
- ▲ Controls internal sound chip
- ▲ Good if you want to control MIDI via data
- ▼ Editing not too easy
- ▼ Quantize limited

● WADDINGTON SEQUENCER

FOR Atari ST
FROM Public Domain
PRICE about £22

Amazing Canadian 64 track sequencer. Although limited in facilities like quantize and editing it is nevertheless a real bargain at a silly price.

- ▲ Costs next to nothing
- ▲ Excellent introduction to MIDI sequencing
- ▲ Easy to use
- ▼ Limited facilities
- ▼ Can crash on occasions

● EZ TRACK PLUS

FOR Atari ST
FROM Syndromic Music: 01 444 9126
PRICE £49.95

Reasonable sequencer that is fairly easy to use. Compatible with other Hybrid Arts programs that also boast a multi program environment. Limited on quantizing but not bad for the money. Editing in data only but good for organising songs.

- ▲ Good price
- ▲ Easy to use
- ▲ Compatible with Hybrid Arts EZ Score
- ▼ Limited on editing and quantizing

● STUDIO 24 MK 1

FOR Archimedes
FROM EMR: 0702 335747
PRICE £99

The cheapest sensible sequencer for the Archimedes. Cuts a few corners here and there but is not a bad sequencer with average editing facilities.

- ▲ Best for the Archimedes in this price range
- ▲ Can be upgraded to more powerful Mk2
- ▲ Very fast

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- ▼ Poor documentation
- ▼ Editing of data non-graphic

- ▼ Editing is nearly always numeric and not easy to understand

SYNTHESISER VOICING SOFTWARE

One of the great boons of MIDI, especially with the complex multi-timbral synths/tone modules that are on the market. See the set-up on-screen instead of labouring over a LCD and create sounds easily. Many programs have automatic voice generation to help with creating new sounds.

● CZ ANDROID

FOR Atari ST
FROM Syndromic Music: 01 444 9126
PRICE: £75

The most useful program to get if you have any of the Casio CZ series synths. On their own they are pigs to program and the preset sounds are rancid; use this and your CZ will never sound the same.

- ▲ Easy to use
- ▲ Excellent graphics
- ▲ Good library facilities
- ▼ Can't really think of any!

● 3D PROGRAMMER

FOR Atari ST
FROM Soundbits: 021 733 2063

A smart piece of software that not only covers the Roland D110 but also covers the keyboard versions D10 and D20.

- ▲ Easy to use
- ▲ Configures a very difficult instrument

- ▼ Roland's version of D110 may not work with it (or any other software!)

● X-ALYSER

FOR Atari ST
FROM C Lab (Sound Technology): 0462 480000
PRICE £175

Very intelligent voicing program for the DX7 synth. Has built in conversion to MIDI sample dump so that the sound can be replayed from a sampler directly.

- ▲ Very easy to use
- ▲ Good library facilities
- ▲ Sample dump
- ▲ Use of graphics
- ▼ Price

● SYNTH LIBRARIES VARIOUS

FOR Amiga, ST
FROM Public Domain
PRICE £2.95 approx.

It is worth noting that there are various Public Domain programs that will voice the most popular synths; e.g. DX7, CZ series, as a cheap cheerful introduction - they could well be your best bet.

- ▲ Price
- ▲ Usually have a set of new voices for your synth
- ▲ Sometimes have random voice generation
- ▼ Sometimes fail for no apparent reason
- ▼ Editing not always available

SAMPLERS

Another growth area for computers. The Public Domain market is full of samples of all sorts, from well worn rock numbers to Thunderbirds! However to actually digitise sound you will need hardware and this is where the expense comes in. The main points to remember are that editing needs to be clear and easy, sounds should be able to be filed away to be re-used in other utilities and MIDI support is certainly a must for the serious user.

● FUTURE SOUND 500

FOR Amiga
FROM HB Marketing: 0895 444433
PRICE £89.95

Very clean and clear sampling with good editing facilities.

- ▲ Easy to use
- ▲ High quality sound

- ▼ No MIDI
- ▼ Cost

● A.M.A.S.

FOR Amiga
FROM Microdeal: 0726 68020
PRICE £75

Quality sampling plus MIDI interface.

- ▲ Clean samples
- ▲ Comes with MIDI interface
- ▲ Well organised program

- ▼ None, unless you think it is too expensive

● PRO SOUND DESIGNER

FOR Amiga
FROM Eidersoft: 0234 273000
PRICE £75

If you get the 'Gold' version, you will get a far superior program. MIDI is included but the interface is extra.

- ▲ Clean sounding samples
- ▲ Has many on-screen features

- ▼ MIDI interface is extra

● I.S. DIGITISER

FOR Atari ST
FROM Innovated Software: 0903 213614
PRICE £69

A sampling package with the options of buying extra software for MIDI and/or clever wave form displays.

- ▲ Very high sampling rate
- ▲ Good filters
- ▲ Program can be expanded

- ▼ MIDI not in original program
- ▼ Could be costly

● REPLAY 4

FOR Atari ST
FROM Microdeal: 0726 68020
PRICE £59.95

One of the first sampling packages not in its fourth version. Earlier versions available on Public Domain as sample players only. MIDI well looked after.



COMPUTERS + THE SMALL BUSINESS = SUCCESS

IF YOU CHOOSE THE RIGHT SYSTEM

In the busy and ever more complicated world of the small business you've got to run if you are going to retain or expand your position in the market. Nowadays this means the correct use of user-friendly computer technology - in other words, getting a business package that actually **DOES** what you bought it to do. Yet, in many firms this is not the case and expensive equipment lies idle, gathering dust, while better informed competitors steal a march on them ... but it doesn't have to be this way.

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PC TO TV AND VIDEO IN CGA AND EGA

Vine Micros can supply a large range of PC-TV Adaptors which allow the connection of PCs to standard TVs, Videos and Monitors. Both CGA and EGA versions are available - the latter being able to support 640 x 350 line modes (only 280 lines viewable at any one time) with a full 64 colour palette. Our UHF Adaptors (not suitable for PC1512) connect to both a TV through its aerial socket and to a video recorder. The SCART Adaptor is only for TVs with a suitable connector but does give a near monitor quality. Other adaptors include a monochrome composite video version, a digital version for connection of BBC micro or Amstrad CPC colour monitors and a device to allow the Amstrad PC1512 to use a standard monitor.

CGA UHF	£44.95	CGA SCART	£34.95
EGA UHF	£59.95	EGA SCART	£39.95

1512 Monitor Adaptor
Monochrome CV

All adaptors (except PC1512 monitor adaptor) require separate

12v mains adaptor £5.75.

All Prices exclude VAT - carriage free in mainland UK

EGA Genlock Video Adaptor

Vine Micros latest product is the EGA Genlock Adaptor - this allows overlaying of computer text/graphics on TV, Video recorder and camera displays. The adaptor will be demonstrated at the Personal Computer Show (Stand 2438). Available Oct/Nov RRP approx £120.

**See us at the Personal Computer Show
Stand 2438**

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Vine Micros Ltd, 47/48 Hawley Sq, Margate, Kent, CT9 1NY

- ▲ Editing very easy
- ▲ Samples sound very clean
- ▲ Tried and tested program

- ▼ The ST is not the best sample player

● SAMPLER

FOR Archimedes
FROM EMR: 0702 335747
PRICE £126.50

Has all the functions for sampling plus the of the computer to make them very clean 8 bit samples.

- ▲ Fast
- ▲ Many good features
- ▲ Very smooth samples

- ▼ Price

● MULTIPLE PURPOSE PROGRAMS

The 'all talking, all singing, and all dancing' section. These are programs that cross over from having just one dedicated function. In the case of Music-X you have a complete music studio under one roof. The rest are mainly for fun although some serious work can be done on them.

● MUSIC-X

FOR Amiga
FROM SLD: 01 309 0300
PRICE £199.95

The best package in the market. It has every feature you could want. It will program synths, organise and store the MIDI data from anything and sequence in a very professional class and establishes the Amiga in the music market.

- ▲ Many features all at professional level
- ▲ Very well documented
- ▲ Most comprehensive package you can buy
- ▲ Add-on modules available soon
- ▲ Well documented
- ▼ You might think it expensive

● DELUXE MUSIC CONSTRUCTION KIT

FOR Amiga
FROM Electronic Arts
PRICE £49.99

MIDI output, sample playing plus a sequencer.

- ▲ Comprehensive package
- ▲ Well tried and tested
- ▼ Sequencer uses traditional notation
- ▼ A bit slow in operation

● MUSIC STUDIO V. 3.0

FOR PC, ST and Amiga
FROM Activision: 0734 311666
PRICE £29.95

Has waveform editing, MIDI in and out and output. Versions differ in sound quality.

- ▲ Comprehensive program
- ▲ Price

- ▼ Uses traditional notation to sequence

● INTERNAL VOICE PROGRAMS

As mentioned at the beginning, the quality of sound does depend on the computer at your disposal. Only the Archimedes and the Amiga are serious contenders for real sound synthesis at present although Atari are fixing this with the STE and future computers will doubtless go even further down the road to having a synth tucked under their housing. As a mark of just how far this is going, PC owners can actually buy synthesizer cards from the likes of Roland. Expect a large growth in this field soon, moving away from just replaying sample files.

● SOUND GENERATOR

FOR Atari ST
FROM Public Domain
PRICE £2.95 approx..

About the best you can get for the ST's miserly sound chip with on-screen sliders to alter the tone.

- ▲ Price
- ▲ Easy to use and understand
- ▼ Limited value
- ▼ Fun only program really

● SONIX

FOR Amiga
FROM HB Marketing: 0895 444433
PRICE £56.48 but often cheaper

Actually lets you draw and/or create your own sounds imitating a real synthesizer. Has other features built into the program.

- ▲ Good sound quality
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- ▼ Price

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FROM EMR: 0702 335747
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- ▲ Sounds can be filed for use in other programs
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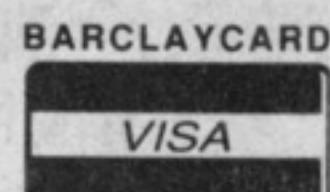
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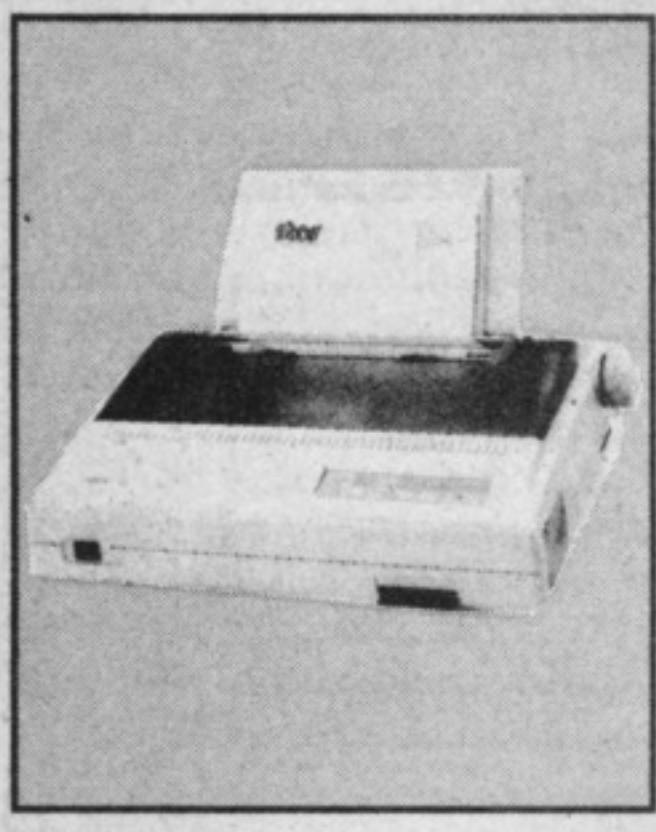
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AMIGA owners! Stuck with CLI? Can't use Workbench? Just need Amiga help? Send SAE with details of your problem to: Gordon Keenan, 61 Glenfinnan Road, Glasgow, G20 8SG. (No callers please)

ANYONE need help with ZX80 programming then just get in touch with your local expert. Phone 666 and ask for Sir Clive Sinclair.

HELP offered on PC's, Amiga's, 64's, Lotus, Wordstar, Psion's, Pascal, Modula 2, 1-2-3 macros. Contact Martin Cross, 30 Madefield, Stevenage, Herts, SG1 1PQ.

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IF you are stuck or just need help with the following Amstrad Spectrum languages software and any computer subject call Shay on 0268 534583 anytime.

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CAN anyone help to connect a Blitz lead to work on a ST 520STFM and twin 1 Meg Cumana's. All expenses paid gladly. Phone 01-893 1293 ask for Derek.

HELP! Anyone out there got hints for Suspect from Infocom on PCW. I can't get anywhere. Mike St Clair, 154 Bedminster Down Road, Bristol BS13 7AF.

MINI-TIP

GEMINI Wing, Amstrad. The Password to enter levels 2 & 3 are EYEPLANT and WHATWALL. P.S. Can anyone tell me why is it that you have to load level 3 after each play?

ST and Amiga cheat for Voyager. On title screen type "When the sweet showers of April fall" to enter the cheat menu.

IN New Zealand Story, to open the Warp Gate, stand on the left of the highest of three platforms, jump up and fire until the gate opens. Then dive in!

TO solve problem encountered in installation of later version of MS-DOS (to replace V3.2) on Tandon PCA40 hard disk. Tel: Don 01-624 1191 evenings/weekends. Thanks.

AMIGA disks, use single sided disks, once formatted the Amiga turns them into double sided disks. This saves you a bit of money if you use a lot of them.

TIP for Dragon Ninja. At the end of every level there is a big bad dood. To kill him kick him into the right side of the TV/monitor and keep kicking.

WORKING with copy protected disks that use tracks above track 35, the disk head sometimes gets stuck - return the drive to normal by initializing it by entering OPEN 15, 8, 15, "10": CLOSE 15. (Commodore).

WARPS in New Zealand Story are on 1.1 left of the jailed kiwi near the wall and on 2.1 follow path over kiwi until big room then shoot for 3.4.

MS Afterburner, incorrect loading instruction. Type BLOAD "after" disconnect joystick, press play. When options appear, connect joystick if you choose to use it. When 'Game Over' appears disconnect joystick again.

BROKEN your beloved Konix SpeedKing? (Plastic ledges inside) open joystick, pack well with polystyrene 'Pasta' (comes in electrical goods boxes) find screws, close joystick. Mine's still OK after 18 months!

COMPLETE Amiga 'Defender of the Crown' in

twenty minutes - press K while loading to get a huge army, then go straight for your enemies' castles as soon as possible. easy!

TEST Drive. Build up speed, then keep fire button depressed. You will automatically drive around the course, release button when you need to steer around other cars.

DURING Infocom's Battletech use a magnifying glass to see the sprites.

ON C64 Led Storm, on main screen use [+] and [-] keys to change music's tone. Faisal Qureshi, Manchester.

PC users - don't touch Recover.com. Delete it now from all disks. Uproot it, expunge it, stamp it out, or you'll be sorreee!

WAR In Middle Earth; load as normal, load saved game from disk one and you will have the fellowship at Rivendell - ST operating system beginners advice given. Ipswich 310582 after 5pm.

SPEEDBALL (C64) avoid contact with players on your team as this will freeze ball carrier. Ball has to be released to continue play. Happens mostly in front of opponents goal.

ON the Spectrum +2 version of Op Wolf load on 48K mode and you will start at level six.

ST users! Having problems copying irregular format disks? Try using the copy disk/format dest. disk option in DC Format the shareware util. Most good PD libraries and BB systems.

USER GROUPS

IS there a Clipper/DBase 3+ User Group in London? I will be grateful for any details. Guy Ellis, 23 Sussex St., Pimlico, London, SW1V 4RR.

ISLE OF WIGHT PC User Group. Anybody wishing to join should contact I.O.W. 0983 614277/614649 and ask for Sean.

BOURNEMOUTH and **POOLE** Atari User Group. Support for 8 Bit and ST. Monthly meetings. Membership £8.00. Quarterly Newsletter £16, £3.80 four issues. Details write to: 248 Wimborne Road, Oakdale, Poole, Dorset.

PCW Users Interested in P.D. send S.A.E. to: PCW-File, 18 Sunbow, Haslemere, Surrey GU27 2QP. The PCW-File is on Boog BBS 0252 626233, 24hrs, V21/V23. No Fees.

IF You want to spread your groups in Asia. Send your latest + your demos to: Tariq, P.O. Box 3581 Safat, 13036, Kuwait. 100% reply, Amiga Only. Also will swap spot.

AMIGA Contacts wanted. Write to Simon, 30 Diamond St., Saltburn, Cleveland, TS12 1EB or Call (0287) 24167.

SPECTRUM Owners Join Indug, the World's largest Spectrum Users Group. Monthly Magazine, Discounts, Support + much more. Send A5 S.A.E. for full details to INDUG, 34 Bourton Road, Gloucester, GL4 0LE.

LAMER? Want to swap software, tips, demos and form a Lamers against Lamers Society? Then contact, Faisal Patel, 73 Track Road, Batley, W. Yorks, WF17 7AB.

THE Computer Information Club. A Club for PCW, PC, CPC, Spec+ and Atari, producing a Newsletter with hints, tips and discover software. Contact The Editor, 345 Western Way, Letchworth, Herts.

AMIGA Contacts wanted to start FREE beginners club in the south to swap games, cheats, tips etc. Please contact David after school on 0425 279835.

GWYNEDD, N. WALES. ST User Group. I want to get in touch with all local ST Users to form a new group. Contact S. Rammerling, Clogwyn Plas Gwyn, Pwllheli, Gwynedd, N. Wales, LL5 36UA.



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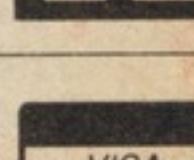
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FOR those of you with 1.3WB, when using RAD: don't load any disks with anti-virus in boot because when you reboot RAD: will be lost.

C64 Laser Squad. Walk through a secret entrance backwards in Paradise Valley and a clone is made of your man. This is not as good as it sounds. Hi Simon.

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DBASE Problem?? I may be able to help. S.A.E. to Rob, Little Green Field, Pans Hill, Limpsfield, Surrey, RH8 0RG.

● VIRUS WARNING

BEWARE of the IRQ and Lamer Exterminator Viruses on Amiga. Send S.A.E. and Disc for **FREE** Virus Killer (Powerful) to Phil Palmer, "Claremont", Searle Street, Crediton. (Returned by Post).

THE Ghost Virus may be contained on one monthly's free disks, and it's not Format! It's relatively harmless so just keep it contained on one disk.

AMIGA Users of System 2 Virus Protection Program **BEWARE!** Virus X treats disks inoculated with System 2 with a specific virus warning message. Found with Virus X version 3.10.

FOUND. Nasty Amiga Virus which corrupts discs. Examine Disc X, you will find blocks of the Word "Lamer!" Erase these to kill it! Cannot be killed with Virus X V3.20 (So there!)

● PEN PALS

AMIGA contacts wanted. PD, hints, swaps, etc. contact F.J. Hume, 3 Carlcroft Place, Collingwood Grange, Cramlington, Northumberland NE23 6ET. Phone: (after 6pm) 0670 731924

AMIGA owner pen pals wanted in N.W. London area to exchange tips, listings, software, etc. Games and serious. Write to Jon Simons, 'Berwick' Lawrence Road, Pinner, Middlesex HA5 1CH. BYE!!

AMIGA contacts wanted, send SAE and list for mine to I. Parsons, 44 Alten Road, Waterlooville, Hants PO7 6DS. Commodore 64 for sale, Datasette, Joystick, £115's software. £100. Trilogic Expert Cartridge £10.

YO! Cool Amiga Contacts wanted to swap Demos etc. Write to 52 Altoft's Lodge Drive, Normanton, West Yorkshire, WF6 2LD. Don't

Delay Write TODAY. Hi Richard, Paul and Zag.

AMIGA Owner seeks other Amigoids to swap games, tips and crazy ideas. Write now. P.S. Get a move on!!!

ST Contacts wanted: Carl, 47 Kedleston Road, Leeds, LS8 2BU.

AMIGA Penpals wanted. Varied interests, games, music, 68000 coding. I will reply to all letters. Send letters to: Lee Hutchinson, 3 Fagg Street, Stockton, Cleveland, TS18 1HQ. Hello John.

AMIGA Contacts wanted. Write to Nik, 1 Downview Road, St. Helen's Ryde, I.O.W., PO33 4YE. Britain. Hi to Russell, Julian and Mark.

AMSTRAD PCW owner would like to correspond with other enthusiasts. Swap ideas, hints and alike. Don't Delay, Write Today to: Andy, 14 Clayford Way, Stoneycroft, Liverpool 14. All letters answered.

PENPALS for Amiga wanted. If interested please write to: Jeff 45 Westbury St., Laisterdyke, Bradford, BD4 8PB. Overseas especially wanted inc. U.S.A. & Canada.

ANY Serious Amiga/ST coders (NOT BASIC!!!) out there? Get writing to DC (No Swapping) further details tel: (0258) 73719 (W/day) Hi: Del, Jobey, Bob C, Doug, Mongo, Rich A, Dave W, Andy B, System 3.

ST Contacts wanted to swap P.D. and other software. Write to William Lesurf, 76 Sunnyside Gardens, Upminster, Essex, RM14 3DR. 99.9% Guaranteed Reply! (Only Kidding, 100% Reply really!) (Fame at Last!)

Q.L. Users wanted to write to, and swap tips etc. with a newish Q.L. User. Please write to: Alan Preece, 1, Haughton Court, Featherbed Lane, Harlescott, Shrewsbury, SY1 4NJ.

ST penpals wanted. Also are there any User Groups in my area? I'm mainly into Comms, Prestel, Micronet and Local BBS. Tony Parry, 115 Minster Court, Liverpool, L7 3QE.

AMIGA Contacts for the latest cool demos etc. Write to Ads, 19 Marina Road, Leicester LE5 5NG. Mega Greets to Pod, Sinbad, Ginger, Colin, Steve's or AXL 9 Park Ave., Leicester.

AMSTRAD 464 + DDI-1 Contacts wanted 100% Reply Guaranteed. Write to: Mike, 14 Belmont Rise, Cheam, Surrey, SM2 6EQ.

AMIGA Contacts wanted. Write or Ring Fred Ball, 292 Bispham Road, Bispham, Blackpool, FY2 0HQ or Tel: 0253 593530. All letters answered.

WANTED Play-by-Mail opponents for Borodino and Waterloo on the Atari 520. All budding Napoleons, Kutuzovs or Wellingtons welcome. Brett Lynes, 24 Harrogate Way, Wigston, Leicester, LE8 1YB.

TEACHER has just acquired some Apple Macs and now needs help, P.D. Discs, etc. Write to: G. Munro, 16 Buchanan Ave, Bishopston, PA7 5ET, Scotland. All letters answered.

ST Contacts wanted. Swaps, tips, dirty jokes, etc. Write to: Alan, 1 Davaar Road, Saltcoats, Ayrshire, Scotland, KA21 6HB.

AMIGA Pen Pals wanted to swap P.D. Demos etc. Send lists and Disks to: Neil, 23 Kilts Moss Lane, Bramhall, Stockport, Cheshire, SK7 2BG. Fast Reply Guaranteed.

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● HUMOUR

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HOW many ST owners does it take to change a
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WHY is it that the ST has a built in Midi Inter-
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has the sound chip similar to a spectrums ???

WHEN is Populous coming out on ZX81? Will it
have all the same features? When is R-Type
coming out on the Electron?

MAN: Have you got a space bar for an ST?
Shopkeeper: Hmmm...., seems like a fair
swap! Wiz (an Amiga owner!), Belper, Der-
byshire.

A software supplier requested a copy of a
backup disc from one of their users. A few
days later, a photocopy of the disc arrived in
the post! (True story).

DID you know that if you take the word "Atari",
add a few letters, take some away, you get the
word "Crap"?

WHAT'S the difference between an Atari ST and a
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3 Brothers For Sale, going WAAH!, err, sorry.
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FOR Sale - One girlfriend, slightly used, moans
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BASIC NCE readers letter template for all word
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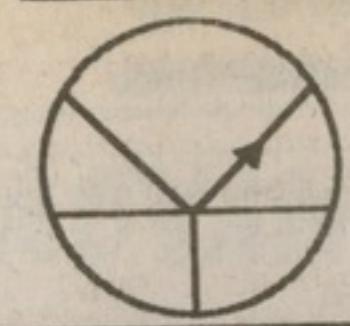
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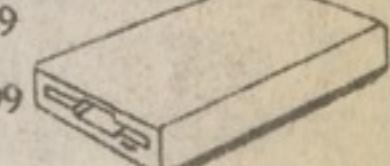
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● PERSONAL

ST owner with only a rabbit (named Ashley) for company, wants ST contact to swap cheats and software for ST. Chi-Ho Lam, 16 Courthouse Gardens, West Finchley, London N3 1PX.

ST and Amiga contacts wanted, to swap software, tips, hints, ideas. All letters answered. F. Patel, 73 Track Road, Batley, West Yorkshire, WF17 7AB.

ST contacts wanted. Write to: Harry 43 Princes Court, Ayrshire, Scotland. Hi to Simon C in W.G.

SEE you soon George. I'll dedicate by next program to you. All the best from Beaver and Chipmunk.

GOOD Luck with debut Mark! Hope you find that nasty bug! (Joke). Watch out world, here comes tyme (sic) and reality - the development team who will change gaming. Probably! Mad Matt.

HELLO Andrew Graham of Pembroke. I bet the novelty of owning an "A-meagre" has worn off, and you're back to your Speccy. Told you so. Jamie. P.S. Where's me videos??

WANTED: Contacts with Amigas! Want to swap PD, ideas and software? I do! 100% reply! Write: Simon Knipe, 69 Fields Road, Alsager, Staffs ST7 2LX NOW! P.S. hello Johnathan!

AMIGA contacts wanted to swap games and demos, contact: Dave, 13 Polton Avenue Road, Bonnyrigg, Midlothian EH19 2PA, send lists. 100% reply.

ST users and Amiga users wanted please write to Janet 21 Darwin House, Alder Drive, C/Wood, B/Ham B37 7OF.

WELL done Mum for passing driving test! And Happy Anniversary to Mum and Dad for 20

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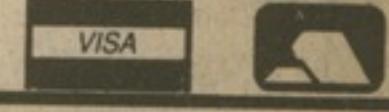
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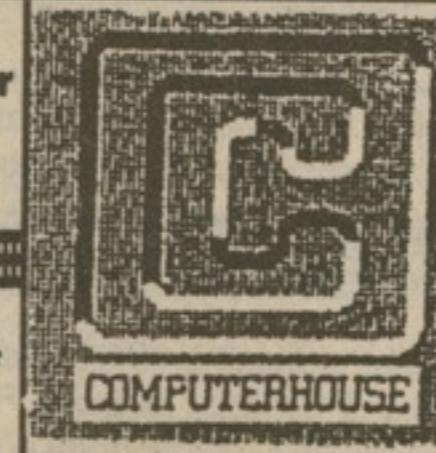
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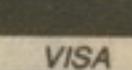
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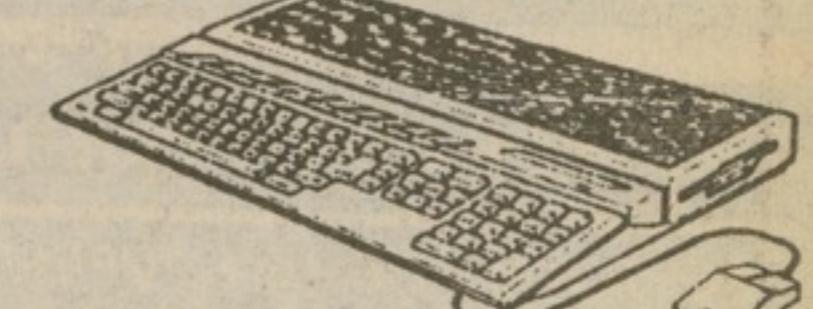


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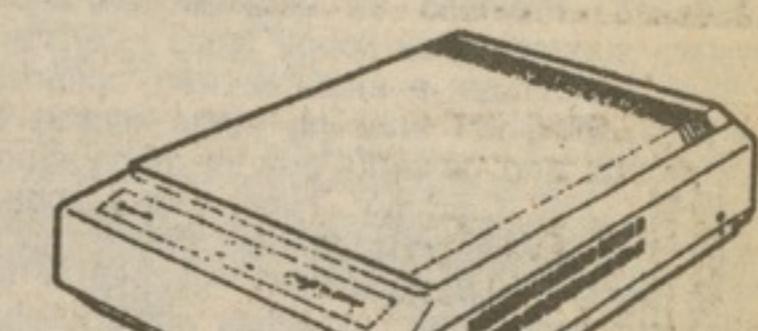
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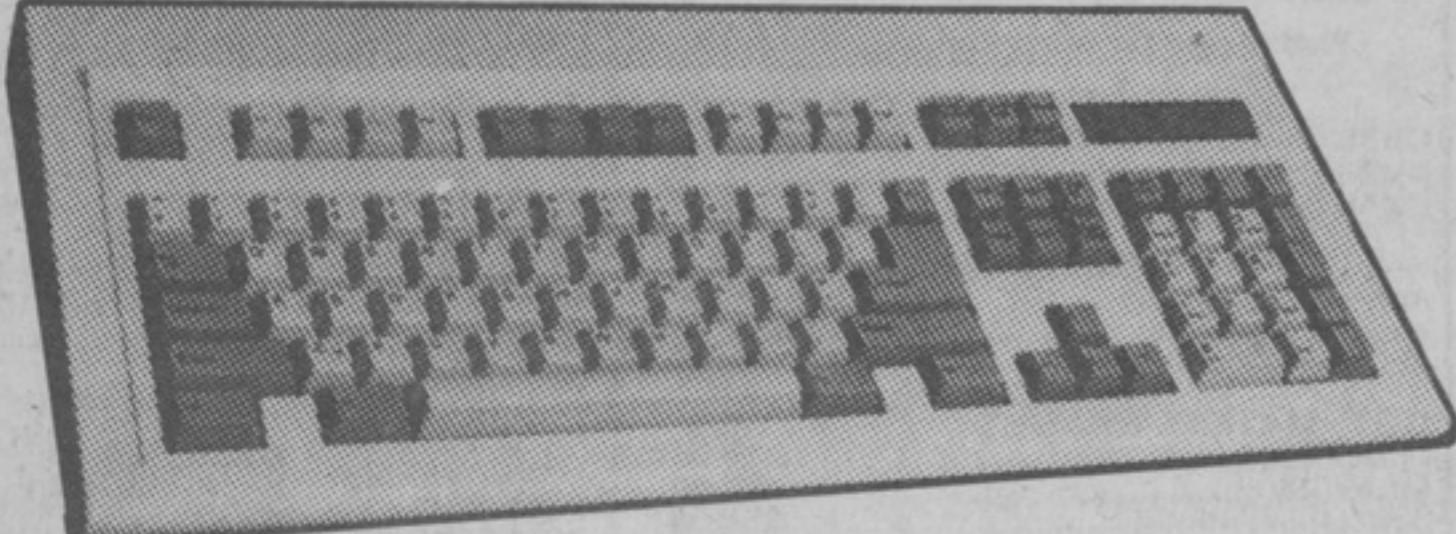




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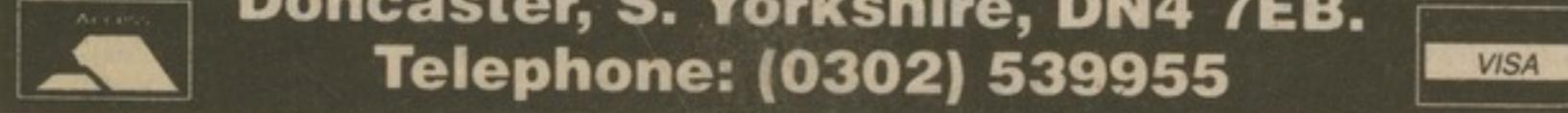
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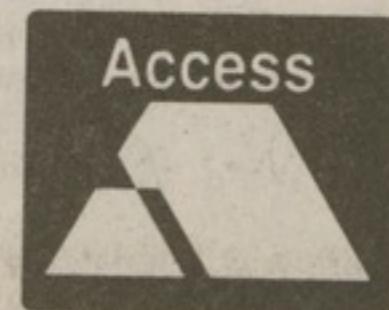
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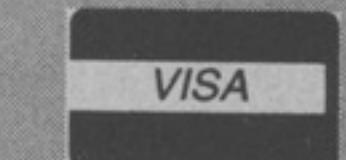
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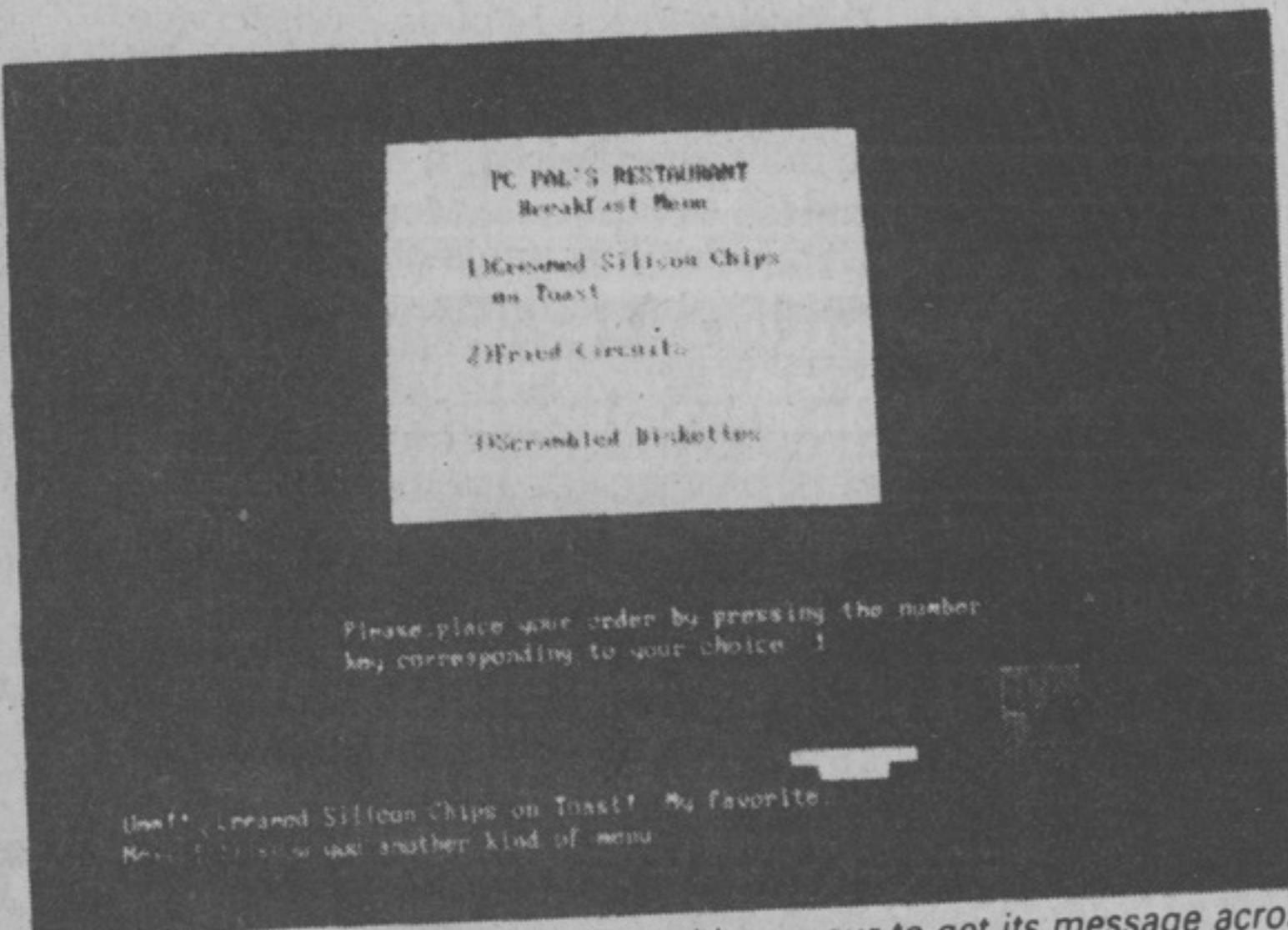
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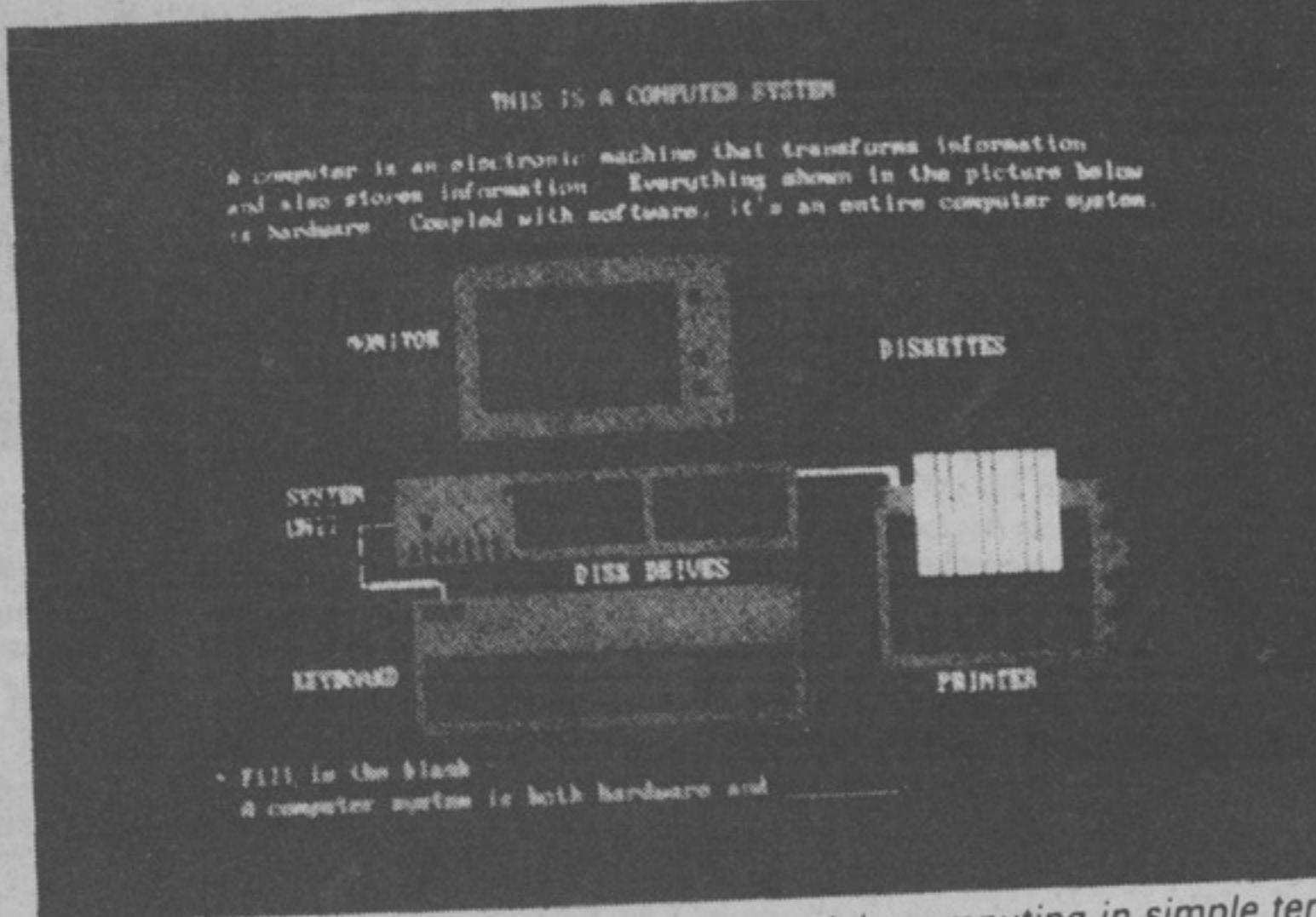
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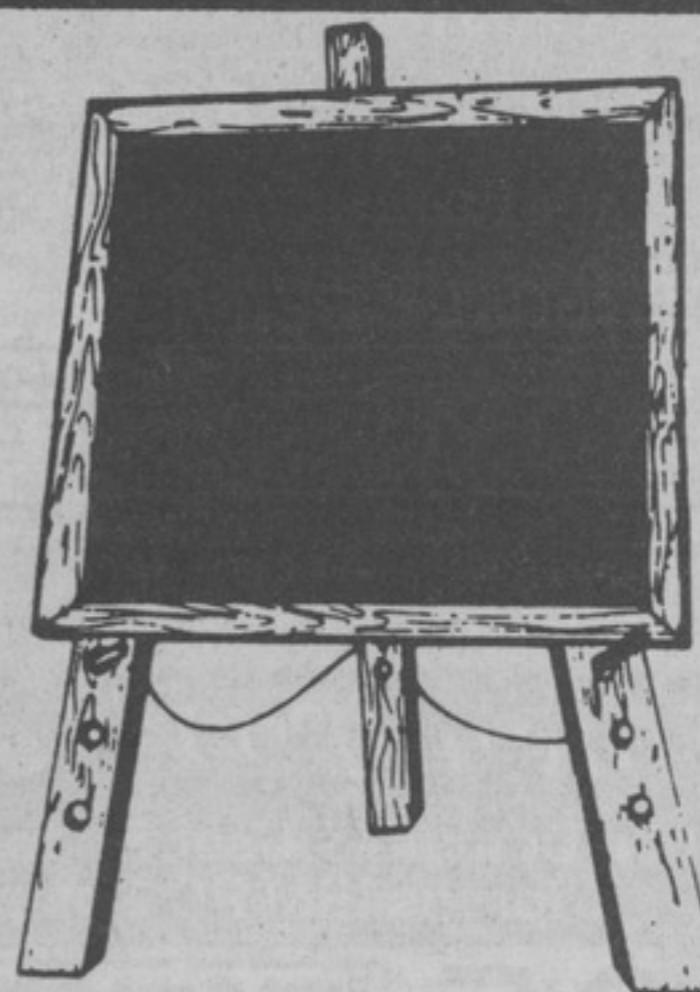
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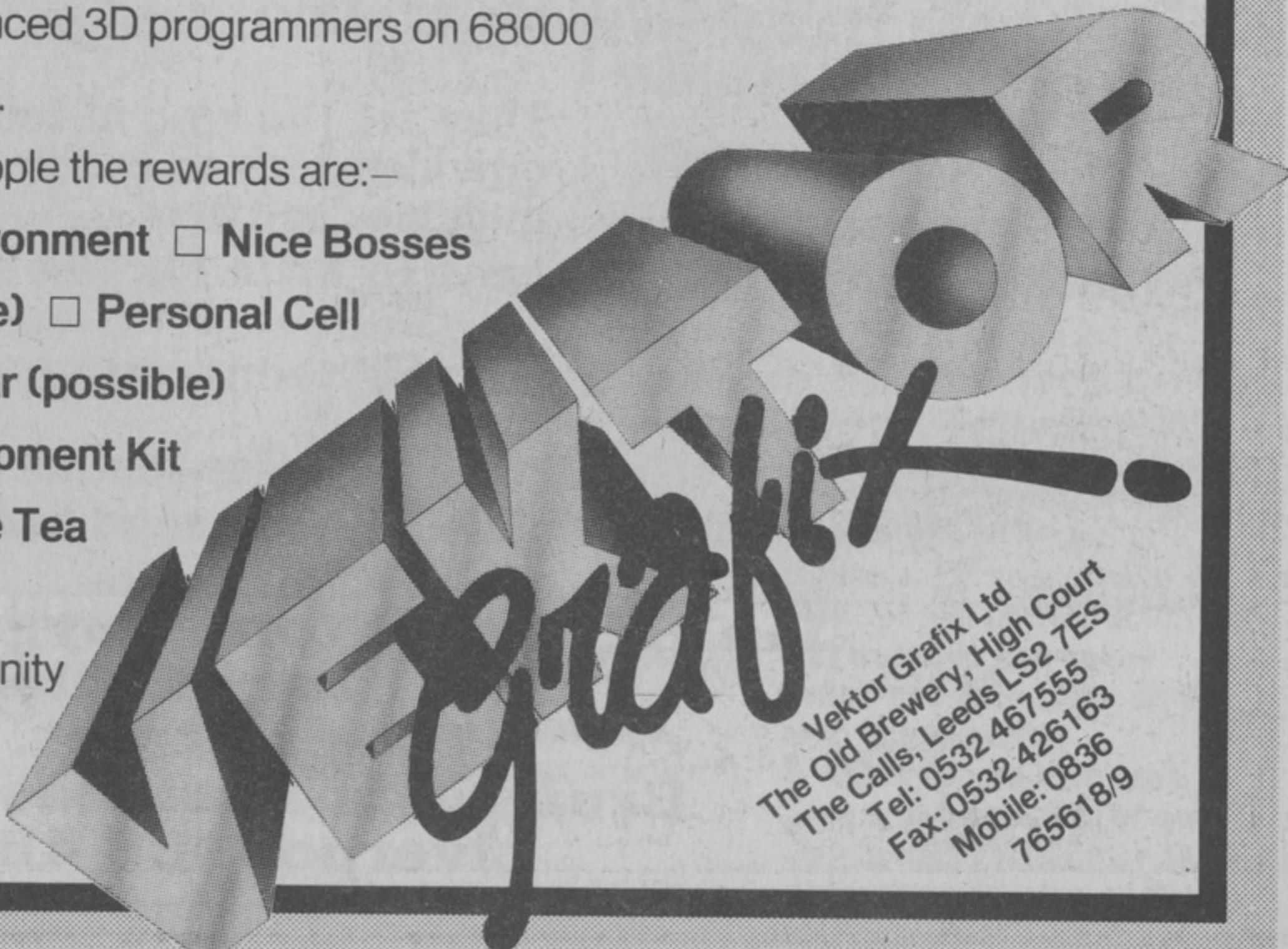
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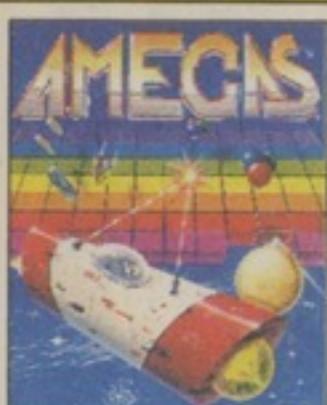
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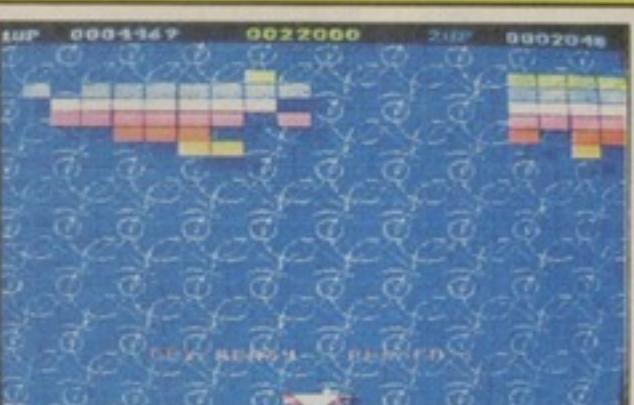
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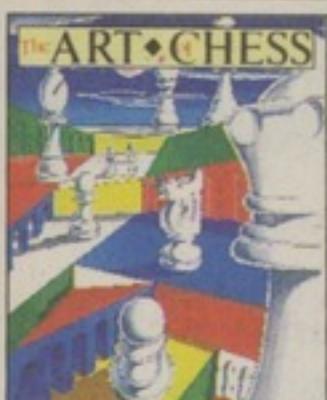
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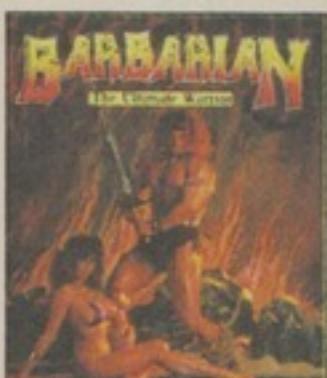
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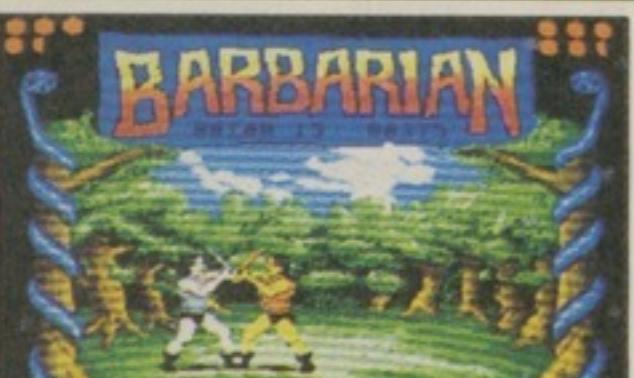
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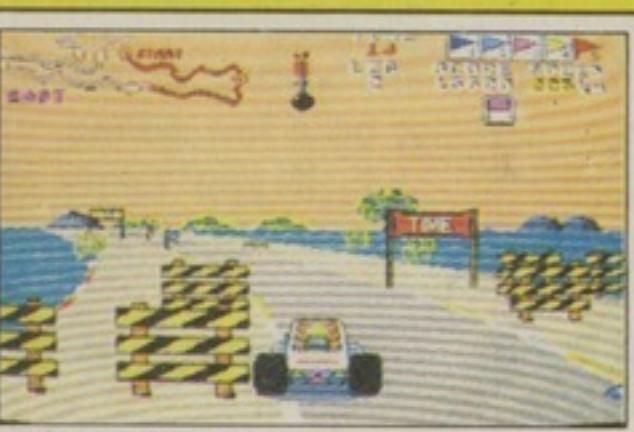
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Mr/Mrs/Ms: Initials: Surname:

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Do you already own a computer
If so, which one do you own?

Dept NCE 0989

TECH TIPS



Personal computer problems? Express' Agony column has the answer. Write in strictest confidence to Uncle Techtip. The best tips win a freebie - so don't forget to tell us your address and machine

■ HELP! Hard card

I own a Sinclair PC200 (don't laugh) and need a hard disk. My first choice would be a hard card but I am told it takes up one and half expansion slots and with only having a grand total of two expansion slots to my name I am forced to delete this idea from my memory. It seems I have nowhere to put an internal model so that leaves an external one. Could you recommend a 30-40Mb hard disk of this persuasion at the cheapest possible price.

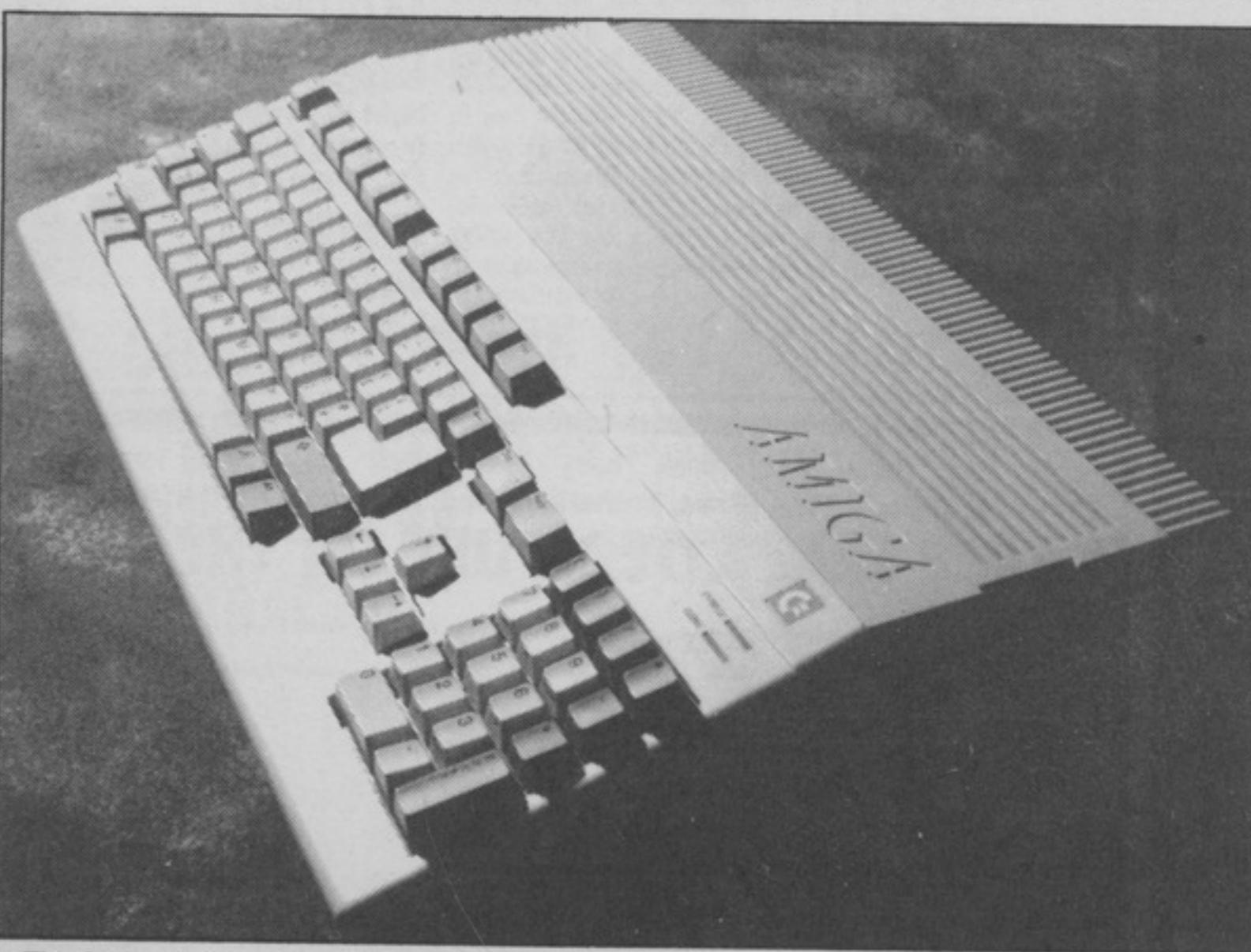
M. J. Strading, Llandrindod, Wales.

Who told you hard cards take one and a half expansion slots? Absolute rubbish! Have a look through the small ads in Express or our sister magazine PC Plus wherein you'll find several hard cards, needing only one slot and all at a reasonable price. And in future, listen to no-one except you favourite uncle.

■ BUG Comic capers

I recently purchased *Comic Setter* on the Amiga and found a pretty bad bug. When drawing with the continuous line tool, it is impossible to finish the drawing. To terminate the sequence of lines, the manual says you should double-click on the last point but this does not work.

S. Ward, Sutton Coldfield, West Midlands.



• The Amiga bugs saga continues (see Comic Capers)

■ HELP! Modem maniac

I have recently noticed that you have been talking about modems, I recently bought myself a Spectrum +3 and a Protek 1200 modem. I'd like very much to know where I can get hold of a full list of bulletin boards. Also I am stuck as to how to operate my new modem because I have no passwords or telephone numbers to contact. It would seem that to acquire a Micronet password I have to buy a new modem.

Please could you tell me where I could get hold of a short list of bulletin boards, a manual for the Protek 1200 modem and most important of all how to get hold of passwords for Micronet and Prestel.

N. Griggs, The Devons, Brays Lane, Rochford, Essex. SS3 4DP.

You really are in a muddle aren't you? To obtain valid passwords for Micronet and Prestel you must take out a subscription to the services they provide. Current charges are Prestel £8 per quarter, Monday through Saturday 8am-6pm 7 pence per minute, all day Sunday and after 6pm 1 penny per minute. Paying the first £8 quarterly fee automatically provides you with a password. Micronet costs a flat £91.95 per annum. For that, you receive passwords which will allow you to gain access to a variety of services such as electronic mail, news, downloadable software conferences.

Contact Prestel and Micronet on

0442 237788. There isn't a full list of bulletin board services but several computer magazines pad out their pages by running a list detailing several of the more popular boards. Get along to W. H. Smiths and have a free grub about in the computer mag section. Locate the publications with the BBs listed and buy those.

As for a manual, I can only hope that some kind techtipper (and there are millions of them out there) will send one to you in exchange for a few quid or a computerish trinket. How about it techtippers?

■ HELP! Piracy project

I am currently in the middle of my 'O' grade exams and part of my modern studies course involves doing a project of your own choice. I have chosen computer piracy and plan on getting as many views and opinions as possible. I would appreciate it if you would print my address so that anyone who wishes to write to me can do so.

Could you also tell me the address of FAST as I am planning on sending them a questionnaire on the subject.

Stuart White, 6 Queens Crescent, Strathclyde, Scotland ML1 4JA.

Address printed as requested. As for FAST here's their telephone number: 01 240 6756.

■ TIP Multiplan manual

Enclosed you will find some tips and shortcuts for *Multiplan*. This covers only the basics of *Multiplan* but explains some keys and how to do formulae. I think this would prove a good help to anyone using *Multiplan*. **A ALPHA:** This allows the user to enter letters, symbols and numbers. **C COPY:** This allows the user to copy information from one or more cells to others.

D DELETE: This allows the user to delete a row or column.

F FORMAT: This allows the user to position the entry into the centre/left/right of a column and indicates the type of entry into cell, row or column.

I INSERT: This allows the user to insert a row or column.

O OPTIONS: This allows the user to view all possible options.

T TRANSFER: Allows the user to load, save, delete or rename the files on disk.

ALT Q: Allows the user to automatically go to cell 1.1

ALT Z: Allows the user to go to the end of all entries.

ALT D: Takes the cursor one cell to

the right.

ALT S: Takes the cursor one cell to the left.

ALT X: Takes the cursor one cell down.

ALT E: Takes the cursor one cell up.

ALT C: Lists at the bottom of the screen all commands.

Alasdair Gillespie, Spennymoor, Co. Durham.

■ HELP! Spectrum Pascal

I am writing to ask if you could help me on a few points.

1. If you know of a good introductory book to computer architecture.

2. A good Pascal program for the Spectrum +.

3. And last but not least if you know of anywhere I can get a cheap (but powerful) Sord M5 or New Brain (Excuse me, I'm due back on the planet Earth - Uncle Techtip) supercomputer?

A. Thompson, Rawcliffe, York.

1. Structured Computer Organisation is still the standard introduction to all aspects of computer organisation. Written by Andrew Tanenbaum and published by Prentice-Hall it's available from any high street book store for about £15.

2. One of the foremost computer language suppliers around is HiSoft. They have a vast range of languages for various computers at reasonable prices. HiSoft can supply you with Pascal for £25 on a cassette and microdrive or £29.95 for versions suitable for use with the +3 and Opus drive interface.

3. Sure. Within days of this letter appearing in Express thousands of satisfied Sord and New Brain owners will make a bee-line for my desk brandishing the junk computers they wish to be rid of. It will then be a simple matter of handing over your address to all interested parties.

■ HELP! Printer decisions

I am writing for some advice on the Star LC-10 printer. At the moment I own an Atari 520STFM computer and am thinking about buying a Star LC-10 printer for neat text projects (word processing) at college and the odd use for printing graphics at home. But I don't know if the printer is suitable for it. Please can you help?

Yes, I know what you are going to say but I have read Express issue 38 all about printers but I'm still unclear about this particular printer. So please help. If the printer is suitable for my needs, could you also recommend a good medium priced word processor or if the printer is not suitable for me, would you recommend

me to buy an electronic typewriter?
Liang Yue, Crewe, Cheshire.

The Star LC-10 is an excellent printer, reasonably priced which will suit your needs and those of your ST fully. Buy it, enjoy it and forget the nonsense about electronic typewriters. As for a word processor, the ST is a fortunate machine in that it has a large selection of quality PD software available free. Contained within this are several word processing programs. Try looking through the PD libraries currently advertising in Express. ST Writer and 1st Word are two of the best.



• Star's LC10: a game little printer, don't you think?

■ HELP! Dicky drives

I have just bought and fitted a Datel 720K second drive to my Amstrad 1512. It appears to be working OK except for the copying between drives. The message "Drive types or diskette types not compatible" appears when the DISKCOPY A: B: command is entered. Please can you help me with this problem, I am pulling what is left of my hair out.
Mike Spencer, Newport, Gwent.

The problem is that the command DISKCOPY needs to see two identical drives before it can perform a copy of two floppies drive to drive. A 360K 5.25-inch and a 720K 3.5-inch drive are not the same. To solve this problem you have to fool DISKCOPY into thinking that you are copying between drives of the same type. To do that you must set up a third drive in the CONFIG.SYS file on your system by putting the following line into the file:

DEVICE=DRIVER.SYS /D:4/F:0.
Booting the system after entering the command into the CONFIG.SYS file will set up a drive D: which is really the B: drive configured to look like a 5.25 inch drive (you still have B: - a 720K 3.5-inch - available at any time). When you want to copy use DISKCOPY A: D:. The 3.5-inch drive will behave like the 5.25-inch which means that it now only has 360K available. If you want to access the rest of the storage capacity use B: instead of D:.

■ HELP! C64 printer

I own a Commodore 64 and wish to upgrade to a 24-pin printer, but I'm utterly confused as to which will connect or not. I'm keen on either the Star LC24-10 or the Citizen Swift

24. Do I need a special interface? If so, does that give me a choice of any printer available? I'm sick of Commodore's serial interface in the 64!

John Redfern, Bradford.

You're correct in supposing that you need an interface in order to make use of decent printers. What you need is a parallel Centronics interface. This is the industry standard for printer connection and almost all printers have a parallel Centronics connector as standard (Star and Citizen to name but two). Grub about in the shopper's paradise bit of Express or one of the Commodore-specific maga-

me, but they're pretty popular so you shouldn't have any problems.

■ HELP! Re-Quest

I need your help desperately in solving Kings Quest 4 and Space Quest 3. In Kings Quest 4 what do you do after you have got the magic fruit? In Space Quest, what do you do after you have blown up the beam generator?

Oliver Bryan, Poole, Dorset.

I have absolutely no idea and care less, but as you live in Dorset and A Pair of Blue Eyes is one of my favourite novels (wot culture?), I'll print your letter in the hope that the techtippers can offer some advice.

■ TIP Blitter end

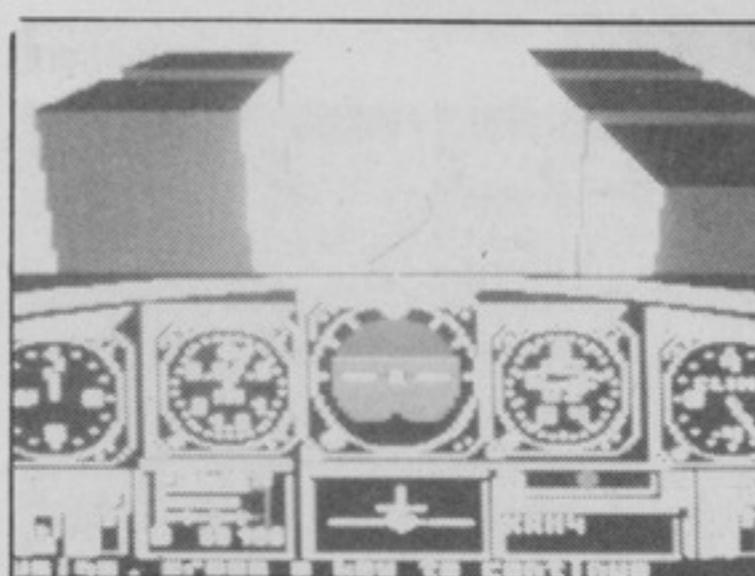
Can I buy a blitter chip for my Atari 520STFM? Where can I get a DOS and do I really need one? In Express issue 44, Penny Goodwin asked if she could get a maths program to teach her young pupils. Well I have just copied some disks that I have (all PD!) and have some music and maths colour programs. If she would like the disk all she has to do is send me a blank disk and her address.

John Pritchard, 25 Ashton Park, Sherbourne Avenue, Halewood, Liverpool L25 9RL.

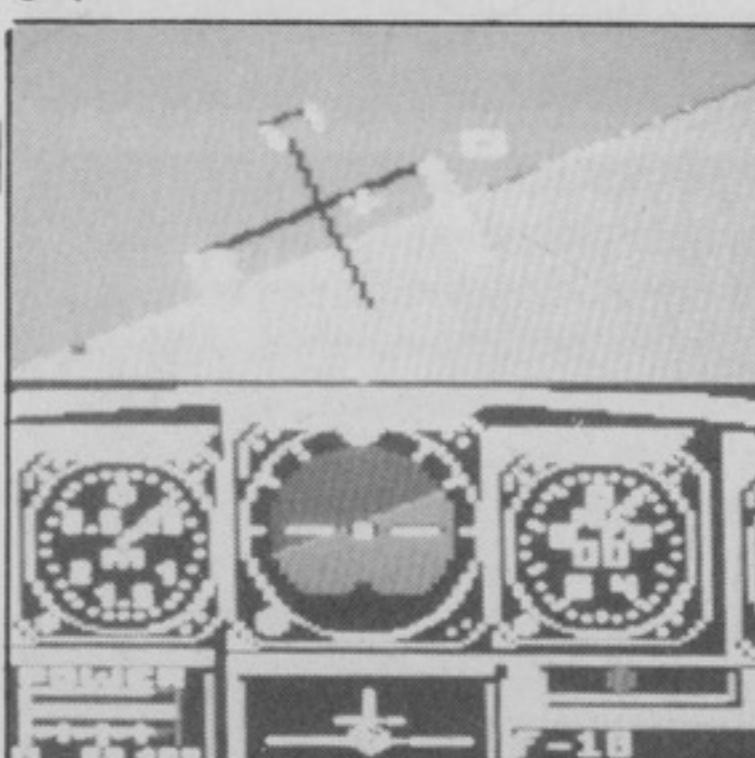
You can buy a blitter for the Atari but as most software does not take advantage of it anyway there really isn't very much point. I think you may be a little confused about the DOS thing. DOS means Disk Operating System and your machine already has one - it's called GEM. GEM (and TOS, also a part of the ST's operating system) performs all the functions associated with drives as well as screen and memory operations etc. Are you out there Pen? Contact this guy for teacherish software.

■ HELP! VGA games

I have bought a Vig1 Plus HD30V PC compatible for both business and home use. This machine is capable



• Chuck 'e's in the sky with top-notch VGA graphics



of VGA graphics and some of my software supports it - WordStar 5, Lotus 1-2-3, AutoCAD and Ventura - but there doesn't appear to be any games software about that uses VGA graphic capability of the PC. Perhaps some techtippers could write to me if they know of any games software that does support VGA.

Iain Groves, Pascal Data Ltd, 65 Armadale Court, Westcote Rd, Reading.

How about it techtippers? As this guy is obviously too lazy to get along to his local software store maybe one of you would like to do his leg-work for him (I don't think).

Gosh! A somewhat harsh Uncle Techtip. Just to get you started Iain, 688 Attack Sub and Chuck Yeager's Flight Simulator both support VGA.

■ TIP One for the Vine

Your reply to a Mr. A. Williams (Express 43) on whether a TV modulator can be connected to his Amstrad PC1512 is incorrect. On page 20 of that issue Vine Micros offer just such a modulator which I have been happily using for several months.

Peter J. Steer, Highbury Quadrant, London.

Poor old Uncle Techtip. Overworked, underpaid, he fails in his duty once again. Vine Micros do indeed market a modulator for the PC1512, the PPC portable and several other Amstrad machines, all of excellent quality, construction and service. Contact the company on 0843 225714.

■ HELP! Pain in the NEC?

I have changed from a BBC B to a 1040 Atari ST and have a NEC FD1037A 1Mb double-sided 3.5 inch drive that was used with the Beeb. As the drive mechanism is the same NEC model as is used in a number of ST second drives, is it possible to use it with my 1040 with a suitable data cable and a power supply? Also can you suggest where I might get a suitable power supply or circuit diagram to build one as the dealers I have contacted will not supply separate power supplies?

F. A. Stewart, Telford.

Perfectly possible. As you correctly state the drive mechanism is exactly the same so providing you can obtain a suitable data cable (try Cumana on 0483 503121) you shouldn't experience any problems.

Power supply circuits? The Maplin catalogue (Maplin is an electronics supplier based in Hammersmith, London amongst other places) is available from any branch of W. H. Smiths for £2 or so and contains lots of cheap circuits and all the parts necessary to build them. Hours of fun with a soldering iron and multimeter for all the family. You'll need only a few simple tools such as a 15 watt soldering iron (Maplin, about £15), a multimeter (Tandy, about £12), some long-nosed pliers and some wire cutters/strippers. I presume you can provide the kitchen table. Exercise patience and don't touch the small, thin end of the soldering iron whilst it's plugged in and switched on.

PC UPDATE

Schneider comment

I've had another letter! In it, as well as telling me how wonderful his Schneider Euro PC is, David Rollinson says nice things about the column and requests more DOS tips and PD software reviews. I know how wonderful the Euro PC is, though I still have worries about its expandability. One half-length slot is really not enough for any serious use. Nonetheless, the machine is very well specified, well made, very inexpensive and comes bundled with Microsoft Works. At around £420 discounted it is very good value. The same company's AT machine is also good value, and if those plugs don't get me a free drink in Schneider's hospitality suite at the PC Show, then there's no justice in the business.

4DOS

In answer to David's request for PD reviews, what about 4DOS, newly arrived in a package from Shareware Marketing (0297) 24088 the other day? This is a DOS shell program with two important differences. First, it doesn't offer a menu-operated front end, but instead enhances existing DOS commands and provides over 30 new ones. This makes it something like TopDOS from Paperback Software. What is unlike TopDOS, though, is that it can work as a modified COMMAND.COM file, taking only 5K of precious RAM and swapping most of itself out to disk or expanded memory.

There are a lot of valuable new commands, including MOVE, RENAME (which handles directories as well as files) and HISTORY, which lets you back-scan through your previous DOS commands. This last command combines with a command line editor to offer very good repeat command facilities.

There are also improved batch language commands, including a GOSUB command, which lets you run sub-routines within your batches. There are also INPUT and INKEY, which allow for keyboard input.

Perhaps one of the most useful facilities within 4DOS is its facility to write aliases. An alias is a bit like a DOS macro, letting you combine a number of 4DOS commands and give them a separate name. You can then execute them all by simply quoting the alias. For example, the 4DOS command:

ALIAS DIRX DIR /2C *.BAT *.COM *.EXE

would assign a function to the alias DIRX which displays all the executable files in the current directory, one after the other. It would also display them in two columns across the screen (/2) and in capitals, like DOS (/C).

The only potential snag is when you start running under 4DOS and start to forget which bits DOS is doing for you and which bits are 4DOS. Start writing batch files, for instance, which use the extra commands and nobody but a 4DOS user will be able to run them. For your own use, though, 4DOS represents a very useful extension to DOS.

Don't take my word for it though, try it for yourself under the shareware system.

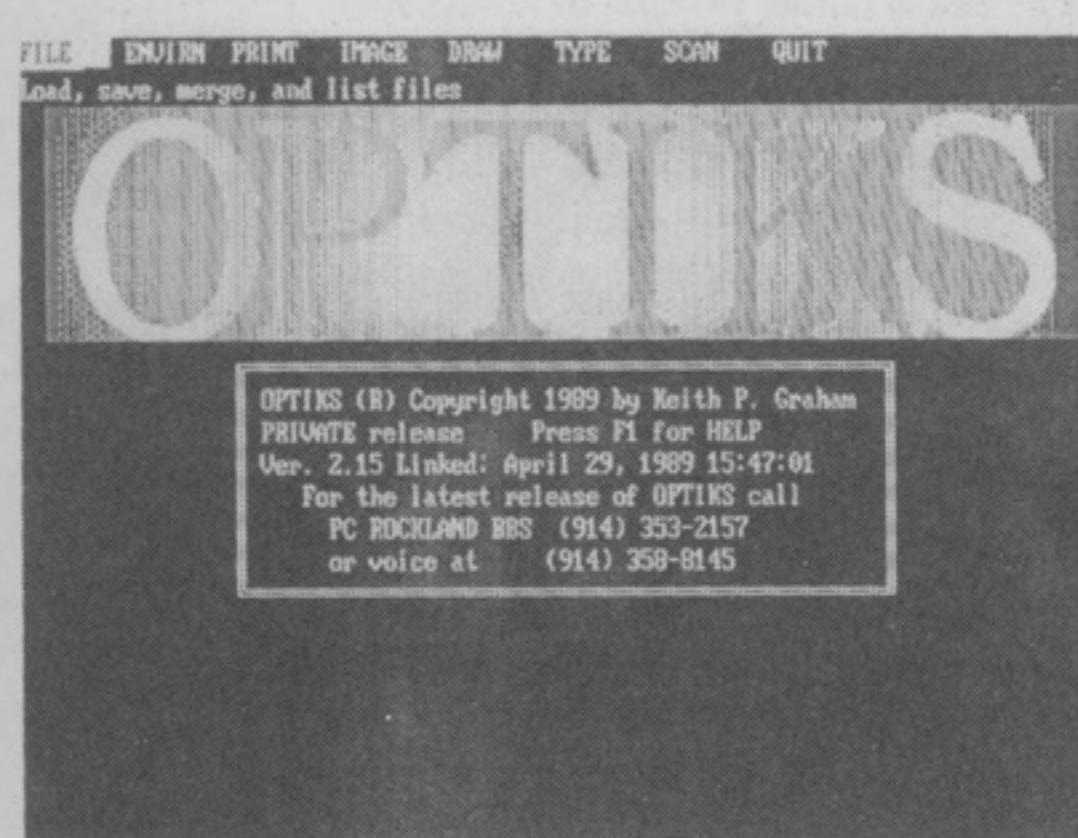
At random

After my brief foray into random selection of letters of the alphabet last month, I've been carrying on a correspondence with avid letter writer, MJ Adams. During the course of this, I started to wonder how many people knew the basis on which pseudo-random number generators work.

Most work by manipulating a long decimal number, the last digit of which is taken as the next random number in the series. Greatly simplified, you might for instance start with Pi, generated mathematically to 6 decimal places (3.141593) and take the 3 as the first number in your random series. You could then square the number and subtract 6.7 from it for the next number (3.169606), and take the 6 as the next number in the series. Repeating the process (3.346402 and 2) will give you a series of digits which you can test statistically for randomness. This example is a very poor one, since the 'random' numbers will not be very random and the manipulated number is increasing in size all the time.

The advantage of this technique though, is that every new number will take pretty much the same amount of time to generate, and the coding of the generator is simple. Pseudo-random generators are rather more complex than this and have the facility to take a number as a 'seed'. This number effects the outcome of each iteration round the calculation loop and thus produces a different series.

The problem lies in the size of seed a generator can take. If it is only allows a single-digit seed, then it's only possible to have 10 unique series of numbers generated. A good generator should take a large seed number.



Graphics update

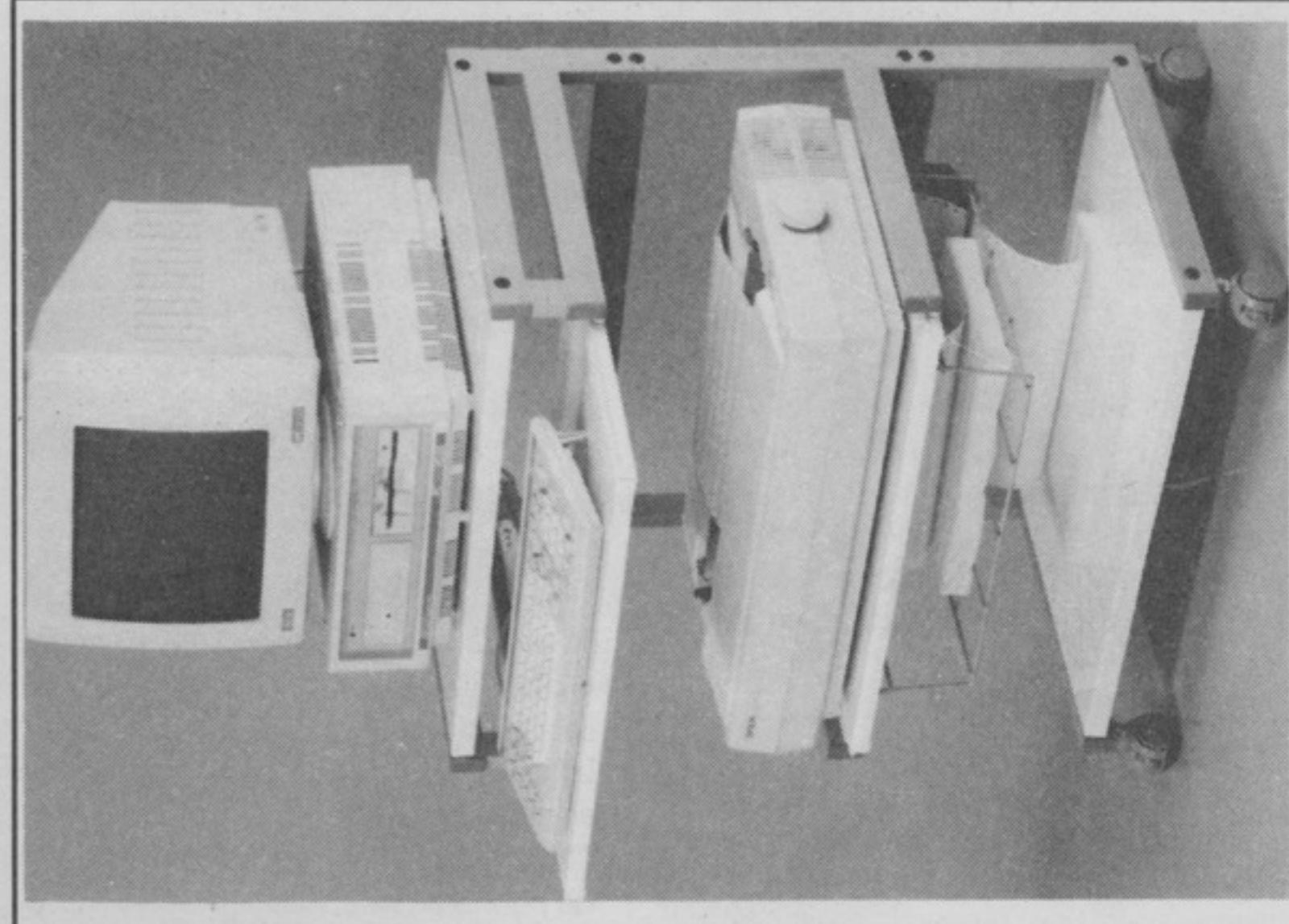
I've recently received updates on two products mentioned before in this column. The full version of Optiks offers many more graphics file formats for saving files than does the shareware version. It lists 32 distinct filetypes, including GEM (both IMG and .GEM), DR Halo, TIFF and PCX. As you may remember, Optiks is about the only good graphics file transfer program. It will take files in most common formats and translate them into most others. Ring Shareware Marketing, again, for this one.

The other program, which was used to dump the Optiks title screen on this page, is Pizazz Plus. This is the new version of the excellent screen capture and dump routine which I have used for over a year now. It pops up at the press of a [Shift][PrtSc] and will dump just about all graphics screens to a printer of your choice (there are 255 listed!). You can select your own screen palette and adjust the correspondence of print shades to screen colours for the best results. The latest version lets you save the files to disk as well as print them out. Details from Ctrl Alt Deli on (0908) 662759.

Simon Williams

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NCE 3

CPC

Good news, bad news

Which would you like to hear first? Well, the good news is that Dixons is cutting huge chunks off its CPC prices, knocking £70 off a green screen 6128 and an enormous £120 off colour 6128.

At £249 for the latter Amstrad's top CPC has never been keener priced. Do your friends a favour and pass on the glad tidings before it's too late.

Mr Kim Burgess, Dixons' buyer for the CPC and the PCW, whatever that is, states that this suspiciously generous offer is a part of the company's usual September clearance, and that many of the machines involved are ex-demo models that have been on shelves for a long time.

Even so anyone thinking of buying those expensive Christmas presents early could do worse than to get in quick.

That's the good news. The bad news is that the cut is being seen in some quarters as confirmation that Dixons is finally to stop selling the range. (You may remember me asking for reports of very cheap CPCs in the shops: I was attempting to discover whether this rumour had any basis in truth.)

If it does turn out to be true this would be the Wrong Answer and a Bad Thing, since it would leave the CPC at a serious disadvantage against machines such as the Spectrum and the Commodore ranges selling to similar markets (ie you and me).

Dixons, however, is as usual refusing to comment, claiming that no decision has been taken. I suppose there's just a chance that when the current sale models are snapped up it might become obvious that there's life in the old dog yet, but I wouldn't bet on it.

It would of course help if Amstrad were to bundle the Virgin/Mastertronic lightgun (finally making its appearance in the shops

This game needs a poke

While we wait with bated breath (yawn) for the arrival on the CPC of Ocean's Batman film tie-in, go back to the original and actually finish it this time, courtesy of Phil Howard's infinite lives poke. To use it, rewind the game tape to the start, type in the poke and then type RUN and press the small Enter key. Press play and any key and there you are!

```

1 Batman - tape
2 by Phil Howard
3 from the files of AA
10 DATA 21, 90, 1c, 36, 00, c3, 00, 01
20 DATA 21, 2d, 22, 36, d3, 21, 40, 20
30 DATA 11, 40, 00, 01, f2, 01, ed, b0
40 DATA 21, 40, 00, e5, 21, 00, bb, e5
50 DATA 21, f2, 01, e5, 21, 07, b8, e5
60 DATA 21, bb, 02, e5, f1, 21, ea, b1
70 DATA 11, d9, b1, f3, c9
80 MEMORY &2000
90 FOR x=&be00 to &be34
100 READ a$
110 POKE x, VAL("&+a$")
120 NEXT
130 LOAD ""
140 CALL &3a6a
150 LOAD "", &2040
160 CALL &be08 •

```

• Written any good pokes lately? Send your infinite John Wayne walking poke for Xybots to: Steve Carey's CPC Centre, NCE, 4 Queen St, Bath BA1 1EJ.

about now) with the CPC. That would hardly be a dramatic, bold move, but it little as it is it would probably be enough to make people look twice. And once they do, of course, they begin to like what they see...

Commercial break

There now follows a Public Service Announcement.

I'd hate you to miss out, so if you haven't yet bought your copy of October's *Amstrad Action* you'd better move pretty quick. It's 100 pages packed with news, views, reviews and reviews, hints, tips, letters, pokes, cheats and type-ins.

And there's a great bonus, too: a cover tape featuring a fully-playable special edition of the mega-wicked *Shinobi*, Virgin's Ninja kick-'em-up, as well as half a dozen unmissable utilities and games. It's sure to sell out fast, so don't delay, get yours today.

That was a Public Service Announcement.

Discology: going up

Julian Sinclair of Cynotel Systems writes to tell me that on a visit to France this summer he picked up a copy from Meridien Informatique of the latest version, now v5.1, of the beautiful and scrumptious *Discology*. The upgrade cost Julian 100FF, which I think I'm right in saying is about a tenner.

Apparently v5.1, besides several new additions to the copier and explorer, also contains a smart properly printed manual, technical notice and full online help for each module.

"If you have reasonable knowledge of French," says Julian, "translation is simple enough, and technical jargon can be found in any good French-English dictionary."

Julian goes on to satisfy my burning curiosity about what those intriguing two letters after each sector are all about. I'd worked out some of them for myself, but he encloses a list for v3.3 (v5.1 has track messages as well as sector messages):

```

/CM - Control Mark - Sector is "erased"
/DE - Data Error - Sector provokes drive error
(track format size different from sector
size)
/DD Data Error in Data field - Sector contains
data and gives incorrect CRC
/FB - Filler Byte - Sectors consist of identical
bytes
/HD - Head Address - Sector contains an
error on the side number of the ID
/ND - No Data - Sector empty with a normal
sector ID, or a sector with an erased ID at
the time of formatting
/SS - Substitution Sector - self explanatory.

```

V5.1, according to Julian, has many more of these helpful two letter messages as well as the three letter ones.

If you'd like to upgrade direct from France send a cheque for French Francs for 135FF (the extra 35FF is for p&p outside France - I suggest you check with them first), to Meridien Informatique, 5/7 La Canabiere 13001 Marseille, France. From this side of the briny the phone number is 01033 91 94 15 53.

Alternatively, if like me you failed every French exam you ever took, you could get in touch with Julian "Francophile" Sinclair, who'll happily write or phone for you.

Julian is at Cynotel Systems, Orchard Close, 15 Beechwood Avenue, London N3 3AU; BBS 01 346 2816 (Viewdata).

It has always seemed a pity to me that a fully fledged English version of the fascinating and educative *Discology* was never released. I imagine that it is too late now, unfortunately.

PS Don't you admire my self-control in not headlining this story "Ah Shall Sey Zis..." or something equally fatuous...?

PPS ... and my cheek in getting it in as a PS?

SPEXY

Share values

A few months back I told you Spectrum public domain software was alive and well and living in Dunstable thanks to the setting up of a library whose shelves will hold nothing else but PD software for our machine. What I neglected to inform you of was the interesting range of Shareware that's also available from the same establishment. As with the PD stuff, the range isn't exactly vast but the programs on offer definitely sound like ones you'll want to check out.

At the moment they've got three Shareware titles on 3-inch disc for +3 owners and two titles on tape for everyone else. On disc there's JEM, which looks like it should provide a WIMP style front end for the +3 Organiser, a basic disc management utility and Adventure Writer, supposed to offer adventure writing to anyone with a sound grasp of Basic. Tape based people get Adventure Writer plus something called LOGO-SPEC which is apparently a version of Logo for the Speccy. You can get hold of 'limited usage' versions of these for £1 + a 3-inch disc or tape as applicable. (If you're fresh out of media, the library can supply either for £3.75 per disc and 75p per cassette). If you're suitably impressed by what you see, upgrading to the fully functional program which comes with documentation costs a further £3. Send your enquiries to Garner Designs, 57 Lovers Walk, Dunstable, Beds. LU5 4BG

Re-run roundup

Recently, lots of software houses have been cleaning out the cupboard under the stairs, wiping the dust off the old games they find and then re-releasing them on gleaming new budget labels. I know I've recommended a few re-released games before but no excuses for babbling about some more as they're by far the most cost effective way of getting together a top notch software collection. Here's a personal selection from the multitude around at the moment.

• Batman (Hit Squad £2.99)

Canny timing by Ocean means this one reaches the shelves just in time to catch the hype surrounding the film. You control a rather rotund Batman in a isometric 3D arcade adventure, which has both arcade and adventurous elements in near perfect balance. The graphics still look good today and you'll get more fun out of playing it than from stuff costing pounds more.

• Wizball (Hit Squad £2.99)

Another Ocean oldie resurrected for the enjoyment of everybody who missed it first time around. Wizball brings back fond

memories of a time when original games still outweighed the coin op conversions and film licenses. Difficult to explain, not to mention play, it basically involves collecting things whilst fending off waves of aliens with an upgradeable weapons system. More than that I can't say, buy it and own one of the most playable Speccy games ever.

• Jack the Nipper (Kixx £2.99)

This Gremlin masterpiece is proof that the best stuff from a few years back is still infinitely better than today's budget fodder. It's another arcade adventure with you this time doing the nappy of infant terror whose objective is to achieve 100 percent naughtiness. Armed only with a pea shooter you have to reek havoc with a series of naughty tasks ranging from scaring the cat to breaking all the plates in a china shop. The sprites are beautifully designed and this has to be the most fun you can have for three quid. (Probably).

Stand and be counted

Tasword's an excellent word processor despite the fact that it lacks windows, icons, WYSIWYG and other such high tech frippery. Probably the only thing it badly needs is a word count. Lets face it, life's too short to count each word individually and besides, that leaves pen/finger marks on the screen. A much more satisfactory and accurate method is to use the program at the foot of the page. (Note that the first line has to be REM followed by 110 characters).

Typed it in yet? Good. Now run it and correct where necessary. If it's all OK delete every line except the first. Next Save the program, load Tasword 2 and press S to exit to Basic. MERGE "" to load the above back in and type PRINT USR 23760 to get a fast(ish) and totally accurate word count.

The program was brought to you by kind hearted co-editor of the renowned Enigma magazine, Hamish Rust. He'll be getting a free game for his troubles. I'm too generous for my own good at times.

Robin Alway

Wafa driven

Richard Padley from Rotherham in Yorkshire writes to tell me that there is hope for Wafadrive owners. One company still supports these useful little machines, Capri Marketing.

You can get hold of them at 24A White Pit Lane, Flackwell Heath, High Wycombe, Bucks HP10 9HR. Telephone 06285 31244. It seems that they bought out the Wafadrive's manufacturer Rotronics several years ago.

The firm are still selling 16K, 32K and 64K Wafas for under £4 each - a bargain - and you can buy the drives themselves for £15 from Microsnips of Wallasey on 051-691 2008.

```

1 REM [110 "a"]
2 RESTORE: LET cs=0: LET x=23760
3 READ a: IF a>>999 THEN LET cs=cs+a: POKE x,a: LET x=x+1: GO TO 3
4 IF cs=11236 THEN PRINT "data ok": STOP
5 PRINT "!!Error in data!!": STOP
10 DATA 33,104,66,17,105,66,1,200,0,54,32,237,176,33,0,125,17,0,0,237
20 DATA 83,0,64,1,0,0,195,15,93,205,248,92,126,254,32,32,14,35,24,245
30 DATA 17,170,66,229,183,237,82,225,192,225,201,3,205,248,92,126,254,32,40,225
40 DATA 35,24,245,197,229,1,64,0,17,104,66,237,176,225,193,229,33,104,66,205
50 DATA 237,92,237,91,0,64,33,44,1,183,237,82,225,200,19,237,83,0,64,17
60 DATA 64,0,25,24,214,999

```

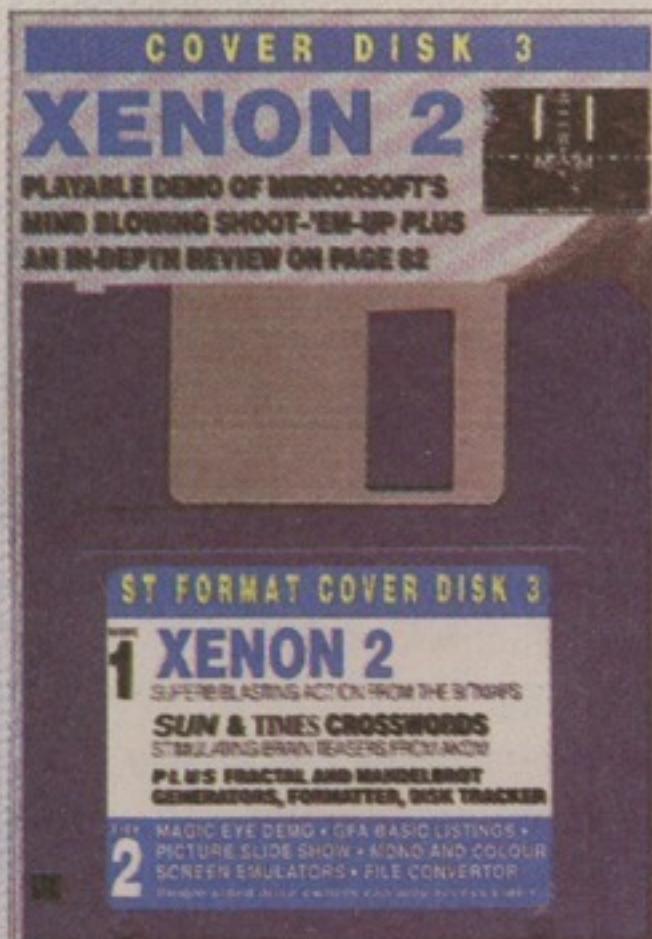
• Program listing to do a wordcount in Tasword

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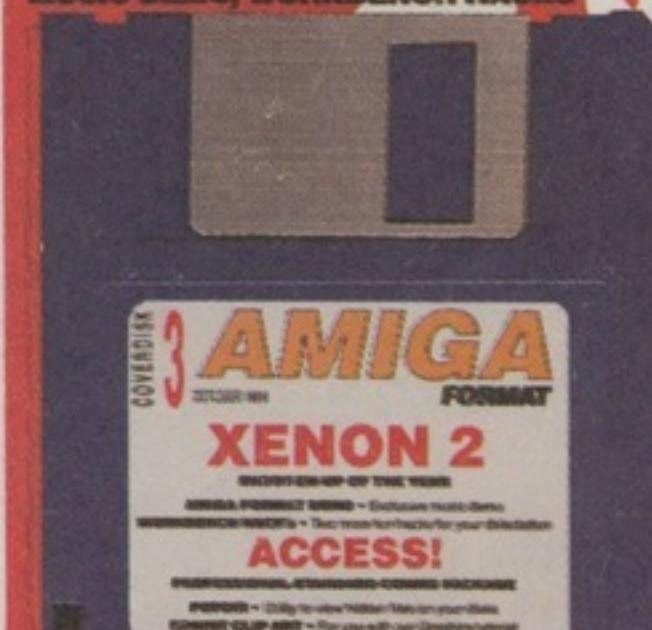
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GET THE BEST OUT OF YOUR MACHINE!

STREET TALK

BY MIKE DUNN

The Faery Tale Adventure was a huge success in America; this graphic fantasy adventure was also a big hit with those who bought it in Europe.

Unfortunately not that many people did, because there was only an Amiga version, and it cost fifty quid! However, Microllusions have repackaged the original and are putting it out for £19.99 on the Amiga and ST, as well as releasing an IBM version costing £29.99 on 5.25-inch disk, £34.99 on 3.5-inch disk. (Aside: Isn't it about time PC game manufacturers stopped pretending that a 3.5-inch disk costs £5 more than a 5.25-inch one?) There's a C64 disk version under development, and that'll cost £14.99. The plot is old hat now ("Save the land of Holm from the evil forces of the night"), but this is one of the classic adventures, and if you didn't see it when it was at a silly price, make sure you see it now. Also from Microllusions is a huge stock of US product ready for release on this side of the pond. These include... Doctor Plummet's House Of Flux (try saying that after 12 pints), Dondra - A New Beginning, Blackjack Academy, Craps Academy, Romantic Encounters at the Dome, Tracers, Mainframe, Sky Travel, Planetarium, Discovery, Ebonstar, Land Of Legends, Turbo, Galactic Invasion, and Fire Power. Phew!

Other possibly significant games news this month includes Virgin Mastertronic signing a deal with the Comet chain of electrical hardware stores. Comet have agreed to make the Sega the only console sold in 300 of their shops, a deal which can only really serve to strengthen Sega's already strong grip on the British console market.

The PC Show's coming next week with its usual crop of new launches so the shops will soon be filled with a veritable Aladdin's cave of goodies. Happy spending

TAME GA

• INDIANA JONES AND THE LAST CRUSADE (AMIGA)

"After a good game, type "INDY" on the high score table to get a continue option.

On the first level, get past the two men that fire at you by lying in wait and then quickly whipping them one at a time. When you reach the water, wait until the stalactite has fallen, then cross by the ropes, making sure you stay at the bottom of them all the time. On the other side, hit the man (or whip him) then get the torch, but mind the falling rocks. Climb the rope and wait for the third man from the right of the ropes to come down, then jump on the platform, and onto the same rope as him, following him up until the man on the left goes down. Jump over to his rope, and quickly climb then jump to the left.

When you see the cross, walk left, over the bridge, hit the gunner, climb the rope and get the torch. Follow the man, and jump right after the first floor. Clam-

ber up and make your way to the train (having got the cross).

Avoid; gunners, giraffes, rhinos, and knife men.

In the second level, go right down to the bottom floor and continue walking right. Jump onto the rope, and jump left from there to safety.

Walk past the fire rats, over a bridge, and climb the right rope. Jump off and get the shield, then jump back onto and climb up to the castle. Make sure the lightning doesn't strike the castle window ledge.

Get the whip, and then you can swing on the white things. Go to the top, and you're there!

On the third level, make sure the pamphlets don't wear away, otherwise the guards will walk faster. Don't go down the ladder where there are two guards at the end. Get the Grail Diary in the corner of the Zeppelin and make your way out."

BRANDON ISRAELSOHN, Chorleywood, Hertfordshire

numeric pad). Use F5 and F6 to change the main sprite."

MATTHEW AND PETER WARNER, Basildon, Essex

• XYBOTS (AMIGA)

10 REM xxx XYBOTS CHEAT xxx

20 CHECKSUM=0: TOTAL=250477&:

CRACK=523618&



30 START=523520&: FINISH=523667&:

GOSUB 50

40 GOTO 90

50 FOR N=START TO FINISH STEP 2

60 READ A\$: A=VAL ("&H"+A\$)

70 CHECKSUM= CHECKSUM + A

80 POKE N,A: NEXT N: RETURN

90 PRINT "YOUR CHECKSUM =";CHECKSUM;"

SHOULD BE"; TOTAL

HIT LIST
TOP 5 GAMES

Completely free from all additives, preservatives and over-hype. Express presents you with the unbiased and untainted list of the games that should be in your collection...

1. GUNHED

Hudson Soft/ PC Engine only
The perfect shoot-'em-up.

2. BLOOD MONEY

Psygnosis/ Amiga, ST, C64 and PC versions under development
The long awaited ST conversion of Psygnosis's Amiga shoot-'em-up.
Playable in the extreme.

3. NEW ZEALAND STORY

Ocean/ Spectrum, C64, CPC, ST, Amiga
Rescue your darling kiwi from the grip of the evil, wicked mean and nasty etc. bad guys in Ocean's brilliant conversion.

4. A.P.B.

Domark/ Spectrum, C64, CPC, ST, Amiga
Race around the city streets and arrest all the bad guys in this conversion from the excellent Tengen arcade game.

5. LANCASTER

Actual Screenshots/ Amiga, ST
A shoot-'em-up with more than the usual content. A fully playable and addictive arcade-type simulation.

DO YOU OWN THESE GAMES?

- APB
- XENON II
- QUEST FOR THE TIME BIRD
- LANCASTER
- RIK DANGEROUS

We've taken five of the best recent releases and declared war on them!
Express needs you to help

tame them; have you discovered a hidden cheat mode, a poke, or a bug that makes the game easier? Or do you have some tips to share with everyone else?
If you've got the info, send it to:

Tame The Game
4 Queen Street
Bath
BA1 1EJ.
The best game tamers from

each issue win a prize; don't forget to tell us which computer you own!
We're also going to start a high score section to give you something to aim for, but we need some good scores from you - send us three tips on how you managed your score, and then achieve fame and er, more fame in the Gameplay pages...

MINI REVIEW...

DOUBLE-D HORSE RACING *

CDS • AMIGA

Deary me. The sort of horse racing game where you manage a stable or whatever, and actually handle the horse's training and racing yourself, can be quite good fun, but this...

The highlight of the game is the race itself, and that's rubbish. The graphics are slow and the sound FX are limited. OK, it's a strategy game, and strategy games don't generally need good presentation, but good presentation is probably the only thing that could've saved this game. The back of the package explains the game perfectly honestly; "it's a day at the races"; personally, the only thing I can see that goes in favour of a day at the races is the chance of winning some cash at the end; wonderful as Amigas are, they haven't yet invented an infinite cash-maker for it (as far as I know), so steer well clear unless you actually enjoy ploughing through all those dull form charts and things.



GAME

```

100 IF CHECKSUM<> TOTAL THEN PRINT
  "DATA ERROR!":END
101 PRINT "CHECKSUM OK"
110 PRINT "PLACE XYBOTS IN DFO: AND
  THEN CLICK ON"
120 PRINT "BOTH THE CANCEL
  REQUESTORS. WHEN LOADED"
130 PRINT "BOTH PLAYERS WILL HAVE
  INFINITE ENERGY"
140 INPUT "PRESS RETURN TO BOOT
  XYBOTS ";VARK$
150 CALL CRACK
160 DATA 23FC, 0007, FD10, 0003,
  0124, 4EF9, 0003, 000C
170 DATA 23FC, 4EB9, 0007, 0000,
  D292, 23FC, FD4C, 4E71
180 DATA 0000, D296, 4DF9, 0000,
  0600, 0879, 0001, 00BF
190 DATA E001, 323C, 000A, 203C,
  FFFF, FFFF, 13C0, 00DF
200 DATA F180, 51C8, FFF8, 51C9,
  FFEE, 4ED6, 117C, 0063
210 DATA 001D, D0FC, 0020, 117C,
  0063, 001D, 90FC, 0020
220 DATA 4E75, 2C79, 0000, 0004,
  41F9, 00FE, 88C0, 43F9
230 DATA 0007, FBBA, 303C, 0145,
  12D8, 51C8 FFFC, 2A3C
240 DATA 0003, 0000, 23FC, CB40,
  4E71, 0007, FBFC, 4EF9
250 DATA 0007, FBDO
To use the cheat, load Amiga BASIC,
type in the listing, save it, run it and follow the instructions."

```

JULIAN SMITH, Sheffield

• **GUNHED (PC ENGINE)** "To play on a harder level, hold down select and press buttons I, II, I, II... etc. (up to 60 times), when you can select a level. To enter sound test mode, hold down select on the title screen and press left and right in turn to get music mode. Don't attack the ship that divides in three at the end of stage 1 for about 80 seconds for an extra ten up and 20 bombs.

Use all smart bombs then collect 30 pink spheres, but don't collect any other item during this time. If you survive until stage 2, a fl lashing yellow ship like yours appears; collect it to get 8-way fire. You can then collect the protection balls as well as a second item, like the shield."

DAVID BLUNDELL, Maghull, Merseyside

• **R-TYPE (PC ENGINE)** "Complete the game without losing a life (easier said than done!), and then when the ending message appears press run and you'll find yourself on level five (same as level one but much faster and harder)."

• **R-TYPE II (PC ENGINE)** "Type in DHA 7768 MA when asked for a mission code to have full weapons."

• **DRAGON SPIRIT (PC ENGINE)** "On the introduction screen, press buttons 1 and 2 on the joypad until you hear a clinking noise. Start the game with extra lives."

• **DRUNKEN MASTER (PC ENGINE)** "When you die, to start on the same level press S.W. diagonally down and buttons 1 and 2 together."

AHMED WAHEED, Roath, Cardiff



LANCASTER

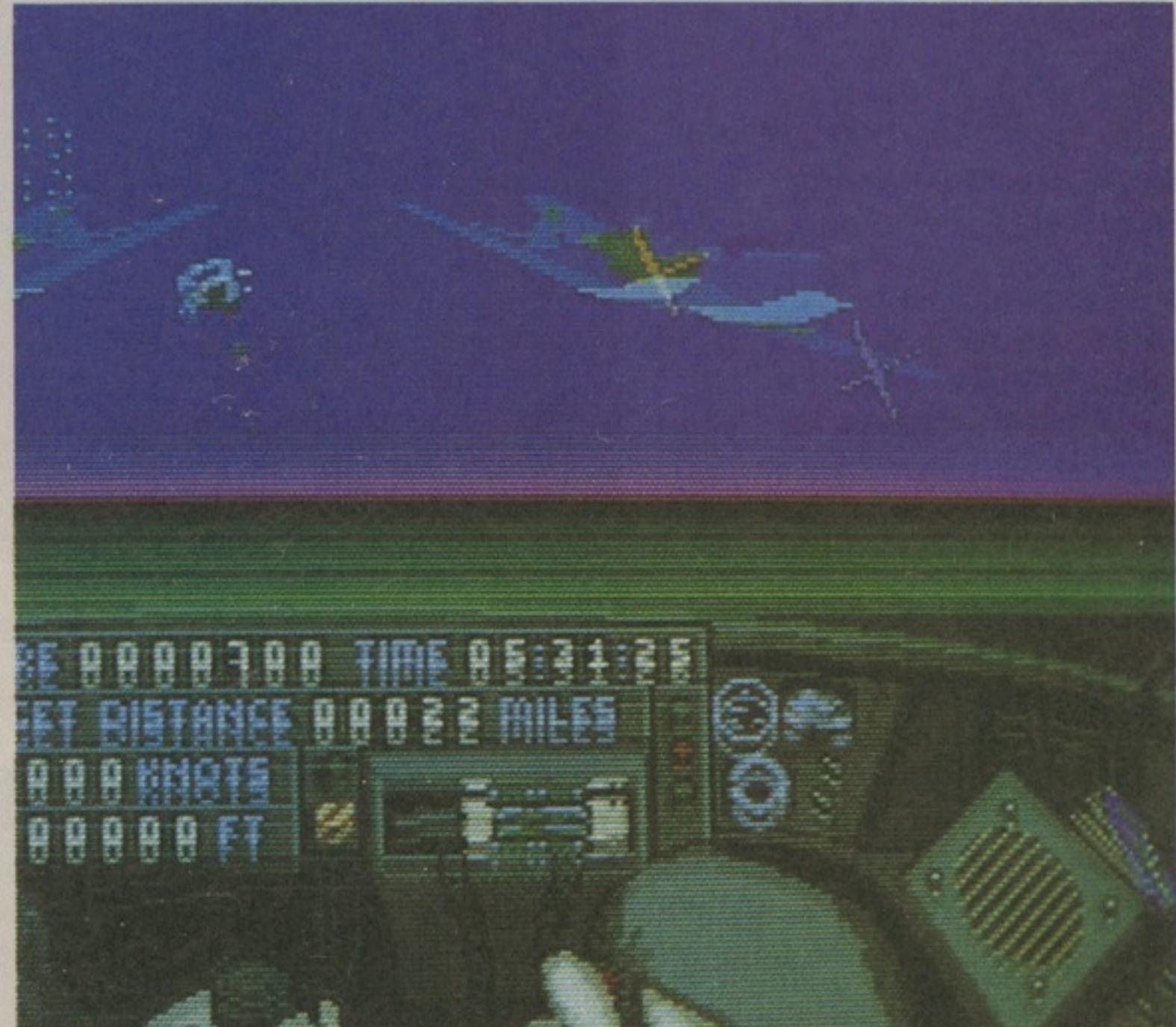
GAME of the WEEK

Lancaster comes out just in time for the celebrations the anniversary of World War 2. Nuke those Nazis!

GAMEPLAY • Lancaster is set in World War II. In the fight against the Nazis, you take on three different roles within your Lancaster bomber; navigator, tailgunner and bomber.

At the beginning of the game, you get a choice of pilots. Once you've chosen you're given the mission briefing; a map of Western Europe, showing your target and a brief description of it. This is followed by an excellent graphic representation of the boarding and take-off, and then it's into the mission proper.

First of all, you have to guide your pilot into the right area for the bombing run. On the easiest level (select Thompson as your pilot) this is fairly simple; avoid the cities shown on the map, and you'll probably get away without being attacked. Needless to say, things get a bit tougher with the other pilots. If you do get attacked, then the screen switches to the tail gunner section, which gives you a view of the enemy planes, as well as flak, barrage bal-



VERSION	PRICE	DUE OUT
ST	£24.95	Now
Amiga	£24.95	Now

loons and the other planes in your squadron. Blast everything except your planes and you'll be OK. There are a couple of things you can do to make this section easier; there's an automatic targeter, or slightly harder, an "aimer" which points out the parts of the enemy plane that you have to hit to bring it down. As your plane gets more and more damaged, the altitude and speed go down. When they reach a certain level, the plane crashes. Once you've reached your target, the screen switches to the final approach, which is like the tail gunner section, except here the target distance counts down. When that reaches zero, the

view goes to the bomb bay. The target scrolls from right to left, and you can zoom in on the area around the cursor for more accurate shooting. After this, you have to fight your way back avoiding the enemy as much as possible.

GRAPHICS AND SOUND • The graphics in Lancaster are of the highest standard; they're smooth, colourful, and generally impressive. The filled-in effect is very good, and some of the animated sequences are great. The tune on the title screen is atmospheric; you can almost imagine it accompanying a film like the Dam Busters! Unfortunately the sound FX are a bit repetitive, but that's a minor quibble with an otherwise fine game, both visually and aurally.

OTHER VERSIONS • The Amiga version reviewed here should be in the shops as you read this. The ST version needs the music added, but unless some drastic problem comes up with that, it should be out soon; we haven't seen it yet, but rest assured you'll know when we find out more!

VERDICT ★★★★★
This is an excellent arcade-style flight simulation. The gameplay is good; although we don't quite think it's the best game of its genre, we certainly recommend it highly. Playable and rewarding.

NAME BEHIND THE GAME

Jason Chown isn't exactly a campanologist's dream (it doesn't ring many bells, ho, ho), mainly because most of the stuff he's done so far has been small-time budget games. However, with this venture into the mainstream market, it looks like Jason is ready to make a name for himself.

With Andrew Northcott (graphics) and Wally Beben (music) the three of them have come up with this war-time extravaganza. Currently he's working on a golf game. It doesn't sound very impressive, does it? However, this one promises to change the normally boring angle

of this type of sports simulation, and make it something far more stunning. Among the features intended at this early stage is a facility that makes the player's view follow the golf ball up into the air, and throughout its flight. We wait with expectant

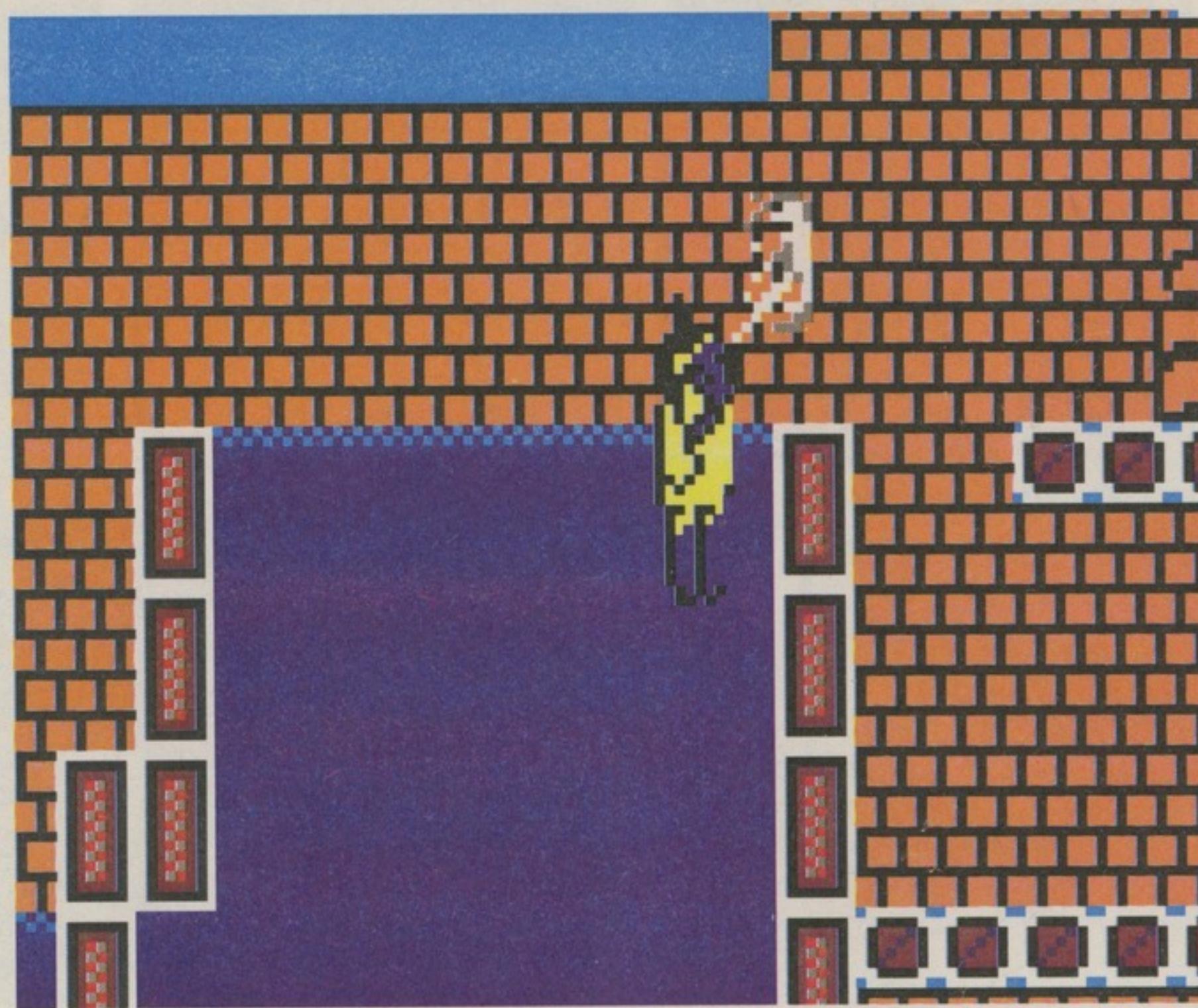
MINI REVIEWS...

NEW ZEALAND STORY

★★★★★

OCEAN • AMSTRAD CPC
• £9.99 CASS, £14.99
DISK • ALSO ON SPECTRUM, C64, ST, AMIGA

Well, I suppose I could have made this another game of the month, but it has been twice already, so this'll just have to be a version update! The game storyline is exactly the same; Tiki the Kiwi has to rescue all his little kiwi friends in this platform game. This is about as accurate a conversion (from the Taito coin-op) as you're going to see on the Amstrad; the scrolling is bit jerky, and the characters are blocky, but the sound is great, and it's very colourful. Gameplay is tremendously strong - I suspect the CPC version is a fraction easier than the others, but nonetheless, it's highly addictive and the sort of game you'll come back to over and over. Got a CPC? Get this!



FIENDISH FREDDY'S BIG TOP OF FUN

★★

MINDSCAPE • AMIGA • ALSO ON ST, PC, C64, AMSTRAD, SPECTRUM

Fiendish Freddy is one of the best presented games we've seen. The graphics are absolutely brilliant and the tunes are the sort of annoyingly hummable ones you can't get out of your head. Unfortunately, the game lacks addictivity. OK, the events are varied, and all are perfect in a visual respect, but most game players, I think, need a bit more than good graphics. The storyline is simple (the bank is demanding its £10,000 loan back, and you have to raise the money by performing the acts well), but presented in an amusing manner, with a tuneful animated sequence at the beginning. However, all the presentation in the world can't help a game that's short on the gameplay side... Simple and limited content; it's definitely worth looking at, but don't buy it if you think the game will be up to the graphics.



"New Zealand Story is one of the best games out."
ANDY WILLIAMS

"Indiana Jones and the Last Crusade is typical of most games of its type; nice picture, shame about the game."

"Thanks Ocean for New Zealand Story and Domark for Licence To Kill, both great games. Also, any pokes for Argonaut 2?"
RYAN DONAHUE, Northern Ireland

"I must complain about the Bitmap Brothers; they are the most over-hyped programmers on the ST. Xenon and Speedball were so similar; it was unbelievable. The best programmers on the ST must be the people who did Batman from Ocean, which is a

Play back

Your views on the latest software -
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complex game with great graphics and sound."

"I saved up for weeks and weeks to buy this program that I was thought was the ultimate game for the ST; with a price of £400 odd pounds, it had to be. I got it home and I discovered that it was a word processor, and there was nothing about that in advert at all. I think that companies

should be more specific in their adverts."

"When is Dragon's Lair out on the ST?"
DAVE DOGSBODY
"In reply to the letter in Express about programmers; many programmers are technical geniuses who work extremely hard for very little money - in future, don't slag off the

programmers; they only do what they're told."
GREG JACKSON, Cleveland

"I recently went into my branch of WH Smith and saw New Computer Express on the top shelf; I bought it thinking it was a pornographic magazine. Could you please, in future, put the words 'this is not a pornographic magazine' in large letters on the front cover?"

"I wondered if anyone out there knows how to use the computer in Catch-23; I can get around alright, but I just need some hints on the computer code."

"Megablast on the Amiga was worth the wait."
SIMON, Ickenham

ONE-LINERS

• A package has just dropped from the skies onto the review desk; PC Beyond the Black Hole; it's a 3D game, as you'd expect with all the funny coloured glasses that fall out when you open it up. Only worth looking at if you can stand the headache and the watering eyes...

• Elite have finally got around to converting some of their best selling 8-bit games to the 16-bit machines. The old favorite Paperboy is ready for release on October 2nd, followed by Ghosts and Goblins, Thundercats, and most eagerly awaited of all, Commando, which Elite are claiming is going to be one of the most accurate 16-bit conversions to date; they'll all cost £19.99.

• Gremlin have got the shoot 'em up H.A.T.E. coming out on the ST, together with Super Scramble on the Amiga and ST.

• Hewson are re-launching themselves with a new logo and a new image, featuring a large catalogue of new games. Slayer, a shoot-'em-up by Microwish with graphics by Imperial, is to be launched by mid-September (so it should be out by the time you read this) at £19.99 on the ST and Amiga. Blood Valley, a tank simulation just on the Amiga, by Creative Thought, will be released at £19.99, with Steel on the ST and Amiga. The brilliant Stormlord will storm its way onto 16-bit micros at £19.99 in November, with two extra levels tagged those of the 8-bit version. There's also a car race game called Fifth Gear on the ST and Amiga for £19.99.

• The big release from Hewson looks set to be Onslaught, out in November. It will be a role-playing adventure with arcade sequences, featuring ten kingdoms, with 256 locations in each, inhabited by a number of tribes. Look out for this one at the PC show.

• On Elite's compilation front, another volume of The Story So Far is ready to hit the shops on October 2nd. On top of this, two Thrill-time packages are coming out in November; Gold and Platinum. The Platinum package will feature more games than the other, and they will retail for £9.99 and £14.99 (Gold) and £12.99 and £17.99 (Platinum).

• Hewson's compilation schedule also looks good; the Premier Collection II is out for the ST and Amiga in October, for £29.99. This promises a selection of games all of which can claim to have received a magazine rating of more than 90% (or equivalent). The Christmas Collection is also ready for release soon, on the 8-bits, at £12.99, £17.99 for C64 disk.



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Resurrection

A week can be a long time in computers. I was all ready to mourn the passing of the ABS club when I received a letter a week ago from Peter Cumberland stating that because of other commitments he could no longer continue with the club. Today, with this column already written, another letter pops through the box containing a retraction a piece of software for review and a list of software available through the club. I must confess to feeling slightly aggrieved, having gone to the trouble of writing a witty piece, and now I've got to rewrite the whole thing. In his letter Peter states that so many people begged him to continue that he finally gave in. I'm glad he did, but please telephone me next time. I could easily have killed the ABS club off prematurely. The software, which is their BASIC compiler will be reviewed next week, unless the Martians invade (which knowing my luck will be quite likely.)

In my piece on SID last week, I omitted to mention the advent of a Micronet

and Prestel gateway. This gives subscribers to those systems cheap access to SID, sometimes as low as 1p per minute on top of normal charges. I'm not quite sure where this leaves SID subscribers. They might not be too grunted, bearing in mind that access can now be obtained just as easily without subscribing. How about a refund Acorn? Or, what about swapping a SID subscription for a Micronet one?

Problem page

I have a problem, no don't call for Clare Rayner it's not that kind of problem. I need to capture BBC screens and get them into the Macintosh for use in a desktop publishing program. I have been doing this by first copying to Archimedes format using a proprietary utility. Then, using RISCOS Draw I print to a PostScript file. Finally, using Edit the files are altered to EPS (encapsulated PostScript) format. They are then ready for inclusion in almost any DTP or drawing program on any computer as EPS files are just text files. The drawback is they are not pukka, and so sometimes cause problems when printing. So I am thinking of switching to using *Screen>>Mac* from Human Computer Interface which is a utility designed expressly for this purpose. If I do, then a full report on its general usefulness will follow.

Andrew Brown



Snide remarks

Do you ever get the feeling, as an MSX owner, that certain computer magazines go a little bit too far with their continual snide remarks concerning MSX as a system. Even this magazine is guilty on occasions, witness some of the comments from some of the editorial staff on the letters pages etc (Who, us? - Ed). I know most of it is done purely for fun, but what annoys me most is that 99% of the people pulling MSX to pieces have never used an MSX, or played a Japanese imported game on an MSX 1 or 2 computer.

Well, this week it's time for a bit of praise for the MSX, the reason being, I have just received details of a host of Japanese imported cartridges and hardware, and am pleased to report, that if you try hard enough you can obtain virtually any device imaginable for your MSX computer (at a price). I have been in touch with MPT Computers Ltd., of 26 Wycombe Gardens, London: 01-458 3310, a subsidiary of MPT of Japan, and now have information regarding a host of items which this company imports direct from Japan. They have also stated that if any MSX user has a query or problem, they would be willing to help via this column. One item of interest I did note was the continued availability of the MSX 1 to 2 upgrade kit, a device which certainly works well enough, as long as you own an RGB monitor, a European PAL TV being unsuitable. Peripherals from NEOS are still readily available, as are Rom cartridges from companies such as HAL, XAIN SOFT, TELENET, TAITO and NDS. Many of the titles are for the MSX 2 only, so you can see that even though there are only a few hundred MSX 2 users in the U.K. software is not a problem, although affording it might be.

Two companies that retail software etc., via MPT are Nighthare Ltd., of Chelston, Torquay: 0802 60146, and Tavistock Hi-Fi of

21 the Broadway, Bedford: 0234 56323. Of course you could contact MPT direct, but the price you will pay is the same as if you purchased through a retailer. The choice is yours. While I'm on the subject of peripherals from Japan, there is one device in the NEOS catalogue that I would just love to get my hands on, but does not seem to be available here yet. The device is an Audio Visual cartridge, and it enables you to use your MSX computer as an oscilloscope, a spectrum analyser, peak level meter, and music synthesiser. A microphone is built into the cartridge with which you can measure the sound characteristics of your listening room. For a Hi-Fi freak like me it would be invaluable. Hopefully devices like these will eventually become available in the U.K. As you can see from the above news, although MSX in the U.K. is a minority format, worldwide there are over three million users, so MSX will be around for quite a few more years.

Games time

"What's the hottest game around at the moment for the MSX user?". I'll give you three guesses, and I bet you're wrong each time. "No, it's not Thunderbirds, or Xenon, or even Nemesis 3", the title which just has to be the top, red hot no. 1 game for the MSX 1 and 2 computer is *R-Type*. This is supplied on a three 3 mega-bit cartridge, and courtesy of Nighthare Ltd., a copy has been on my computer for a week solid. Now I'm the first to admit that shoot-'em-ups get me hooked everytime. When *Nemesis 3* arrived I felt like a kid let loose in a sweet shop. How on earth could *R-Type* improve on the *Nemesis* series was my reaction when I learnt of its availability, after all Konami take the MSX 1 computer to its limits. Well, like *Nemesis 1, 2, and 3* *R-Type* does not have the best scrolling in the world. In fact it is pretty poor, with the background moving in much the same fashion as *Nemesis 3*. What *R-Type* does have is ACTION all the way, with big bold sprites, formidable foes to defeat, and extra weapons to collect. I have managed to fight my way to the end of the first section, but have yet to defeat the alien that you encounter at the end, even though the game has a "continue from last section" feature. Graphics and



Future releases

Zeppelin Games' releases for early October include the ex-full price game *Living Daylights* for budge buyerst. *Living Daylights* is based on the 007 James Bond block buster.

Another game coming from the same software house this October is *Sidewinder*, (No resemblance to the Amiga budget blockbuster). In *Sidewinder* you are a helicopter gunship caught in an underground terrain with all kinds of different enemy attack modules. To be honest the press release makes it sound like a million other games, so there's not much more we can say.

Why is it that some software houses give so little info? The press releases for these games were no bigger than quotes. I've heard about cutting costs but this really takes the biscuit. Come on software houses give us journalists a birthday and flood us with amazing material that will interest everyone.

Most people think that free publicity is marvellous, but many big software houses have so many people working in one office that when the phone rings and some poor journalist is looking for info all he gets is "I'll fax it later" which never happens most of the

time. Another thing why is it that the PR people are always never there, surely they should have someone taking their place when out to lunch ALL DAY!

Come on everybody make my day and send your amazing info that will interest everyone to the one and only address, Sector 64, 4 Queen Street, Bath BA1 1EJ.

Night life

More and more dance records these days sound like computers generated the whole thing. For example a well-played dance record called *Dreams of Santa Anna* by Orange Lemon really sounds like the Commodore 64 chip. Off course we know it's not but surely someone could use this machine and make a weird cult dance record. Take *French Kiss*, that could easily be computerised and released and maybe get the same foot jumping effect as it does now!

Looking

We are currently looking for some amazing cheats for this column so if you think you are able to help then send your cheats to the above address. The person who we think has supplied the best cheats will be sent a disk of goodies so how's that for an incentive. Get pen to paper NOW!

TV

If you watched the Hitman and Her D.J. Awards last Saturday night there was a slight chance that you saw a group of six dancing. The one with the loud tie was Ian but I am not saying which was me because I'd like to keep my street cred. Not that I have any.

Mick and Ian

five years ago. Granted, the OPD didn't have a built-in printer or fax, but it did have a telephone, comms capability, speech synthesiser, database, spreadsheet, business graphics and word processor. If ICL had supplied it with disks, rather than Microdrives, and marketed it properly, it might have been a best seller.

Where are they now?

Some of the companies associated with the QL in the early days had a rather chequered history, and an update on them might be of interest.

The most notorious was Medic Systems., run by one Kris Skoglund, a Swedish national. Medic had what was basically a good product: a floppy disk/expansion RAM unit, that was quite competitively priced. They spent a fortune on advertising and got plenty of orders. Those few punters who actually managed to get some kit were quite pleased with it, and many Medic systems are still in daily use.

When things got too hot for him, Skoglund decamped to Eire, and tried to set up a similar scam over there, with government money. He was eventually extradited and got five years in clink. With remission, he should be coming out in a few months. He'll have a shock - with beer now £1.20 a pint! His troubles won't be over, however, as the judge ruled that he be deported to Sweden, when he finished his sentence, where he faces fraud charges in connection with a business he ran there before.

John Torofex



Fractal report

I've just received Issues 3 and 4 of John de Rivaz's Fractal Report news letter. Issue 3 has an article by QL user John Topham. He has substituted Henon's 'strange attractor' equations into the Julia set formula (a general form of the Mandelbrot set) and used his QL to generate some interesting and novel fractal patterns. John is working on a program to generate images from the solution of fifth degree complex polynomials with complex coefficients. I'm not trying to blind you with science, but attempting to show that it is possible to do original work with fractals, without spending thousands of pounds on exotic hardware.

Fractal Report is published by Reeves Telecommunication Laboratories Ltd., West Towan House, Porthtowan, Cornwall. TR4 8AX, and costs £10 for six issues.

The one per desk?

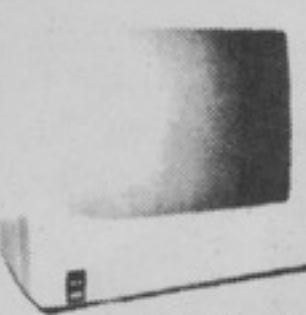
I was rather amused to read about the 'amazing new machines' like the Canon Navi SP in Issue 43. These machines are remarkably similar to ICL 'One per Desk' (OPD), which was based on the QL, and came out about

sound are first class, some of the screens surpassing anything I have previously seen on an MSX 1. MSX *R-Type* has something that many games lack, and that is sheer playability. The game costs £27.00, including postage and package, and is available now from Nighthare Ltd., 11B Walnut Road, Chelston, Torquay. Even at this price *R-Type* is good value. Highly recommended.

Games to watch out for particularly if you are an MSX 2 owner are *Contra*, and *King Kong 2*, both from Konami, and due out later this year. Both will be direct imports from Japan, as Konami no longer seem interested in supplying MSX games to Europe themselves.

Keith Neal

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Service to love

David Axford would like to remind PCW Patch readers that PCW File provides a variety of services:

- Data recovery – if you have a disk with that vital stuff on it which is inaccessible because of a 'Missing address mark', they can retrieve the data (phone first to check)
- PD software – disks of free utilities and programs can be had for £1 (you provide the disk, of course!)
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Details from Bob Ellis on 100 St Peters Close, Moreton-on-Lugg, Hereford HR4 8DW tel. 0432 761860 (evenings); or David Axford, 18 Sunbrow, Haslemere, Surrey GU27 2QP tel. 0428 56438 (evenings)

Proceeds from the data recovery service, by the way, all go to the ME Association charity.

Incredible bargain

Express Editor Rob Ainsley is pestering me to mention the 8000 Plus Tips Collection (because he compiled it) a collection of the best tips that have appeared in that magazine in the last three years, concentrating on LocoScript but also on BASIC, CP/M, Mini Office, Protect et al. – a sort of K-Tel PCW's Greatest Hits.

There's also a disk with templates for

UK HOME COMPUTERS

COMMODORE C64's

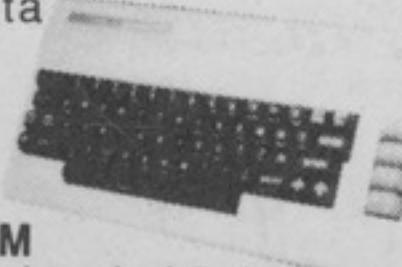
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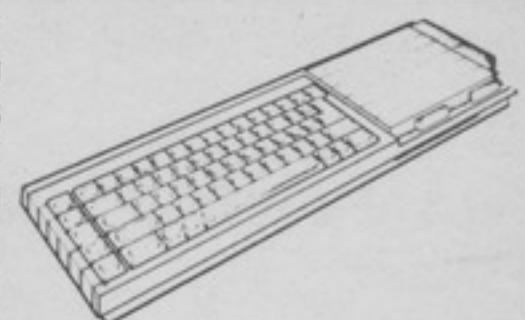
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doing two-column printing, LocoScript calculators, and a gaggle of BASIC listings including a spreadsheet and a spell checker, word counters for LocoScript 1 and 2, an indexing program, sorting utilities and so on, even a music playing program! It costs just £12 including disk from the Special Offers pages of 8000 Plus at Somerton, Somerset, TA11 7PY.

Was that OK, Rob?

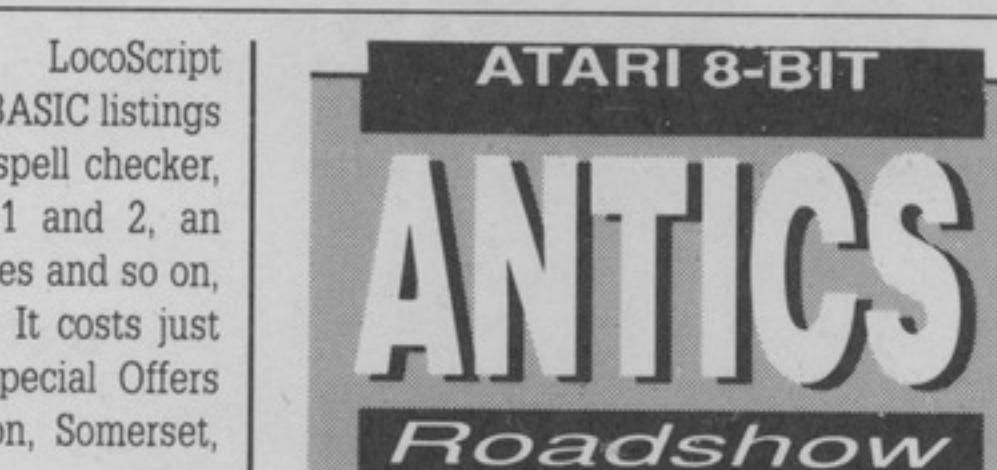
PC pork

The computer trade rag CTW announced last week that LocoScript PC is definitely on the way. Smart money is betting on a price of over a hundred quid for a package including spell checker, mail merge and all those lovable little features of Loco like Greek and maths symbols.

Poor Locomotive – who hate announcing anything until they genuinely have it ready, to avoid disappointment to their customers – are still keeping quiet. Ah, if only they'd worked for Sir Clive in the old Sinclair days!

And finally...

Odd story from Geoff Black, of 'no fixed park bench'. He had his PCW stolen three months ago. Last week he was rummaging round a second-hand tat shop in South London and guess what he finds? Yes, his machine, with the serial number burned off, but definitely his (he remembered the coffee stains). With great presence of mind, Geoff threatened the owner with the police, saying he'd written his name all over it with one of those fluorescent purple pens, and would expose the owner to the police as a trader in stolen gear. Geoff walked out with his PCW free – but just as well the owner didn't challenge him, as the purple pen story was a bluff...



Correction time

Jim – self confessed inhabitant of the planet Dork – has written to correct some of Ron James's comments in the Antics Roadshow which appeared in Express issue 42. Jim says 'In Antics Roadshow Ron James explains that ASCII and ATASCII are very similar which is true. However he goes on to explain that a featured program was using internal keyboard codes. The program did not use keyboard codes – it used display codes which are directly linked to the order of definition of the character set'. To view the somewhat random nature of internal keyboard codes try 10 PRINT PEEK(764):GOTO 10.

Back to BASICS

Rob Berry of Nottingham has been busy again producing the definitive description of the Atari XIO function. This is powerful command which allows you access to the Atari's inner workings.

One of the most powerful commands in Atari BASIC is XIO. Its functions range from graphics to disk and serial operations and used properly it can produce a marked speed increase in lots of functions. It can be quite complicated to use but with a little application, you can control I/O tasking through the available control blocks. The command has this general syntax:

XIO cmd,chan,aux1,aux2,"dev"

Cmd refers to the function you wish to perform (see table below). Channel refers to the channel you wish to use to send information. Device is the disk drive, printer, screen etc. that you wish to access. Aux 1 and 2 are usually set to zero except in the following circumstances: XIO 32, 34, 36 and 38 when used with the 850 interface module require aux1 and aux2 to be configured to set baud rate, word size, stop bits, DTR, RTS, XMT, translation modes and parity. More about XIO and the 850 interface in a future instalment. Here is a table giving details of the range of functions provided by XIO:

Code	Operation	BASIC
3	Open a channel	OPEN
6	Input a line	INPUT
7	Input a character	GET
9	Output a line	PRINT
11	Output a character	PUT
12	Close a channel	CLOSE
13	Current IOCB status	STATUS
17	Draw a line	DRAWTO
18	Fill an area	no alternative

Here are the commands applicable to drive functions:

32	Rename a file	DOS menu E
33	Delete a file	DOS menu D
35	Lock a file	DOS menu F
36	Unlock a file	DOS menu G
37	Move a file pointer	POINT
38	Find file pointer	NOTE
254	Format a disk	DOS menu I

Now for an example of how to use XIO. Suppose you want to use XIO to fill an area. First draw the outline of the shape you wish to fill, poke the number of the colour you are using into location 765 and finally use the command XIO 18,£6,0,0,"S:" making sure the pointer is inside the shape you wish to fill, using locate if necessary. Edmund Blake

COMPUTING CHAOS

More from Mel Croucher's annals of famous computer cock-ups

LONDON, ENGLAND

The distinguished architect, Mr. Peter Cousins, blames the likes of HRH Prince Charles for the vilification of his profession extending to computers. This is because he has just received a wordprocessed letter from the Associated Book Publishers which begins, 'Peter Cousins, Archpick'.

SAN FRANCISCO, USA

The Federal Reserve Bank has a new communications software package installed. Bank operators are given an intensive course in its use before the system goes on line. Nineteen of the organisation's customers immediately benefit from a test program for electronic funds transfer when they are bestowed a small windfall bonus due to the dummy run operating for real. The sum in question? A mere two billion dollars.

REYKJAVIK, ICELAND

On 11 August a British hacker hijacks a 'guest' telephone code belonging to Reykjavik University. The miscreant proceeds to use the University system to break into the city bank and the Icelandic State data security system. The Icelanders discover that there is no way of capturing the intruder, and the entire computer system is now suspect. Security spokesman Helgi Jonson remains unruffled by the prospect of Iceland being run by rogue data. 'I never liked computers anyway, and propose that we use them to play games on from now on. Besides, all the data I need is in this cardboard box.'

(Reiknistofnun Haskolans)

NEW YORK, USA

The uptown branch of Hunter College, University of the City of New York changes its name to Herbert Lehman College and computerises its records.

When a post-graduate student returns from a year's sabbatical, she is asked for her computer records from her previous school, Hunter College. She explains that she is simply returning to her old school, that Hunter College no longer exists and did not keep its records on computer. She is refused admission.

(New York Times)

SOMEWHERE OVER HAWAII

The Space Shuttle's top secret military mission is being used to test laser beam missile defence as part of the loony 'Star Wars' project. Two hundred miles over Mona Kea astronauts report seeing a bright blue beam scoring a direct hit on the space craft, but the experiment fails to be recorded because the shuttle's reflective mirror is pointed not towards Hawaii but towards outer space. The mirror should have been aimed downwards at a spot exactly 10,023 feet above sea level, and in fact this is

exactly the figure programmed into the Shuttle's computer guidance system. The trouble is that the computer was expecting units in nautical miles not feet, and is pointing at a spot over ten thousand miles above sea level, no doubt looking for Klingons.

(Los Angeles Times)

BELFAST, N. IRELAND

With unemployment in the Province rocketing, the DHSS commission an ICL-1904A and 1904S to check out the authorisation of Giro dole payments 'in order to reduce the capacity for fraud by reducing the amount of cash being handled'. Over a two year period, Giro payments increase by fifty per cent. Several DHSS clerks bypass the system and set up a collusion scam with fake claimants. The computers totally fail to handle the cross-checking and 'irregular encashments' rise by eight hundred and forty per cent.

(Public Accounts Dept.)

NEXT WEEK ■ NEXT WEEK ■ NEXT WEEK

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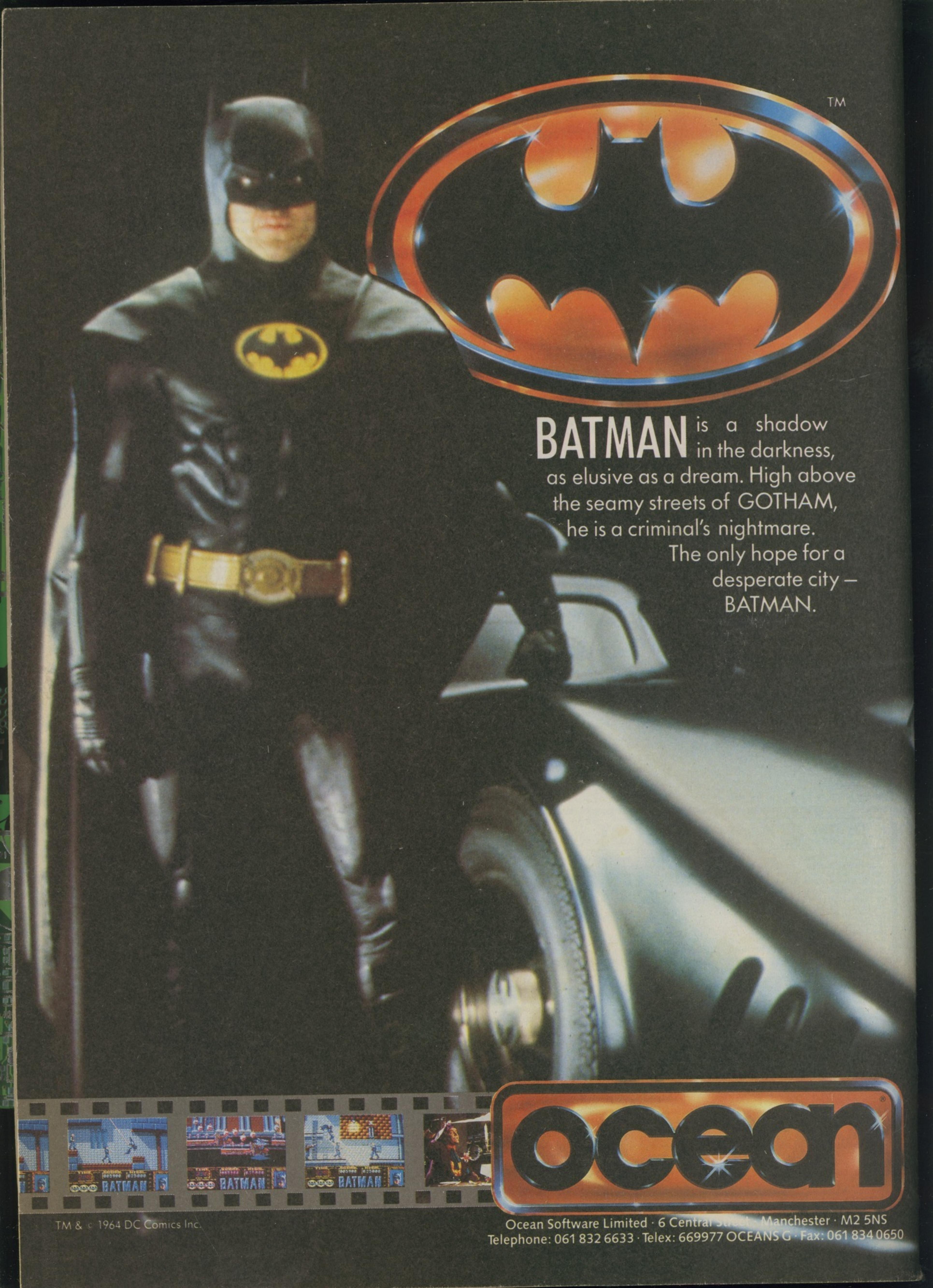
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